DOCUMENT RESUME

ED 193 743 EA 012 649

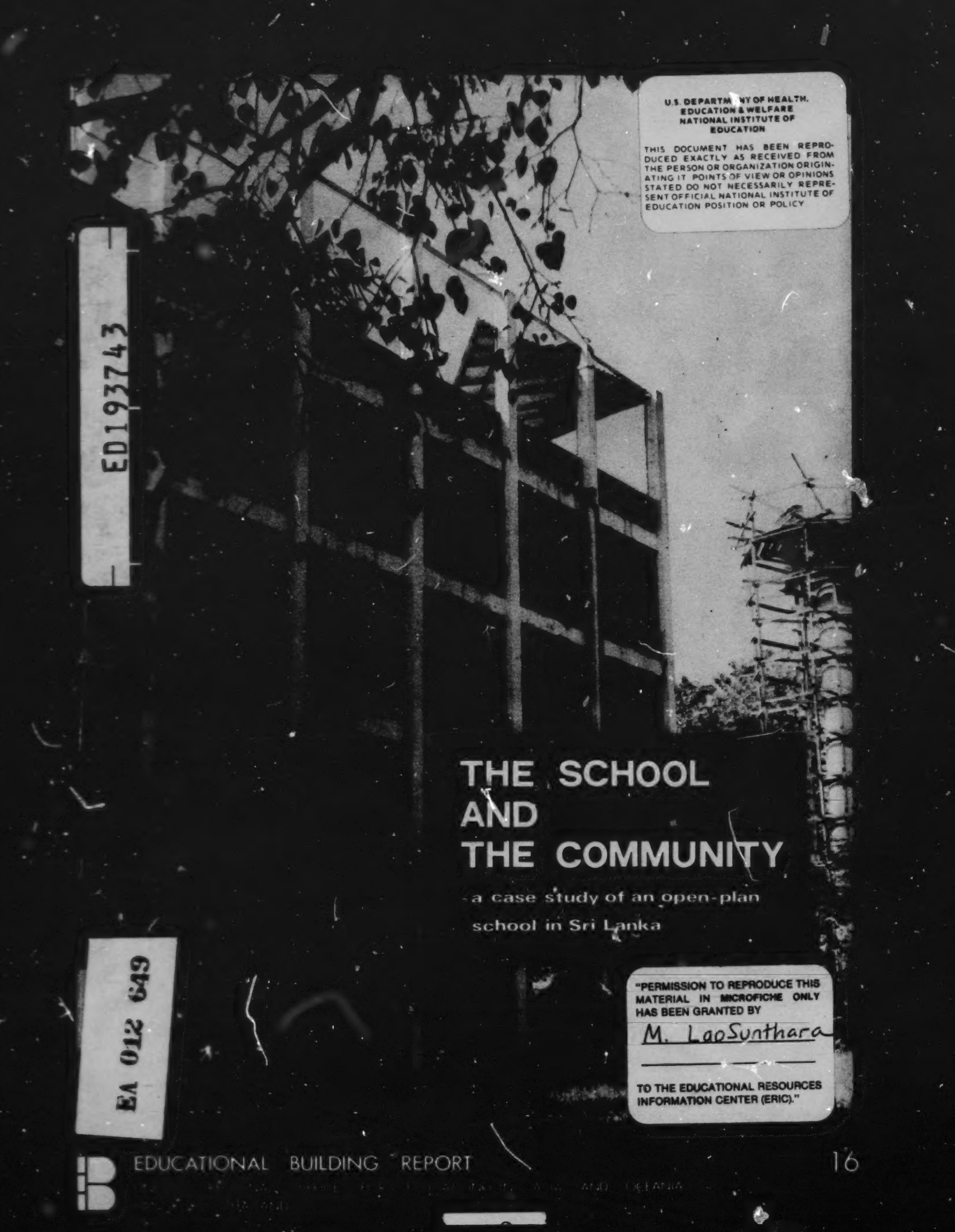
AUTHOR Wijegunasekera, D. P.; And Others
TITLE The School and the Community--A Case Study of an Open-Plan School in Sri Lanka. Educational Building Report 16.
INSTITUTION United Nations Educational, Scientific, and Cultural Organization, Bankok (Thailand). Regional Office for Education in Asia and Oceania.
PUB DATE 79
NOTE 79p.

EDRS PRICE MF01 Plus Postage. PC Not Available from EDRS.
DESCRIPTORS Adult Education; Adult Programs; Case Studies; Community Characteristics; *Community Schools; Curriculum Development; Developing Nations; *Educational Facilities Design; *Educational Innovation; Elementary Secondary Education; Foreign Countries; *Open Education; *Open Plan Schools; *School Community Relationship; Urban Education
IDENTIFIERS *Sri Lanka

ABSTRACT

The architectural characteristics and the educational program of a new open plan Sri Lanka school are the subjects of this case study. The school is open both to the pupils as well as to the rest of the community, a departure from the traditional Sri Lanka school building. The study begins with a discussion of scope and objectives followed by a general background of the open plan school project and the various stages of its development. Next the implementation of the national curriculum and the implications for physical arrangements are discussed. Findings from a survey of 74 households in the area are summarized. The survey was aimed at establishing the socioeconomic status of the community members, their educational background, and their educational and vocational training needs and aspirations. Based on these findings are recommendations for possible areas of community participation in the school and organizational and planning strategies. The appendixes contain the survey form and a users' manual for the new school. (Author/MLF)

****
* Reproductions supplied by EDRS are the best that can be made *
* from the original document. *
****



U.S. DEPARTMENT OF HEALTH, EDUCATION & WELFARE
NATIONAL INSTITUTE OF EDUCATION

THIS DOCUMENT HAS BEEN REPRODUCED EXACTLY AS RECEIVED FROM THE PERSON OR ORGANIZATION ORIGINATING IT. POINTS OF VIEW OR OPINIONS STATED DO NOT NECESSARILY REPRESENT OFFICIAL NATIONAL INSTITUTE OF EDUCATION POSITION OR POLICY

ED193743

THE SCHOOL AND THE COMMUNITY

- a case study of an open-plan school in Sri Lanka

EA 012 649

"PERMISSION TO REPRODUCE THIS MATERIAL IN MICROFICHE ONLY HAS BEEN GRANTED BY
M. LaoSunthara
TO THE EDUCATIONAL RESOURCES INFORMATION CENTER (ERIC)."

EDUCATIONAL BUILDING REPORT 16

Wijegunasekera, D.P.
The school and the community, by D.P. Wijegunasekera, D. Gunaratne /and/ W.S. Perera.
Bangkok, Unesco, 1979.
70 p., illus. (Educational Building Report 16)

1. OPEN-PLAN SCHOOLS - SRI LANKA. 2. SCHOOL/COMMUNITY RELATIONSHIP - SRI LANKA. 3. COMMUNITY SCHOOLS - SRI LANKA. I. Gunaratne, D. II. Perera, W.S. III. Unesco. Regional Office for Education in Asia and Oceania, Bangkok. IV. Title. V. Series.

SfB (97)
UDC 727.2
Dewey 727.2

MAY 1 1980

EDUCATIONAL BUILDING REPORT 16

THE SCHOOL AND THE COMMUNITY

- a case study of an open-plan school in Sri Lanka

by D.P. Wijegunasekera
D. Gunaratne
W.S. Perera

UNESCO REGIONAL OFFICE FOR EDUCATION IN ASIA AND OCEANIA
BANGKOK, THAILAND

© Unesco 1979

Published by the Unesco Regional Office for Education in Asia and Oceania
P.O. Box 1425
Bangkok G.P.O.
Bangkok, Thailand

Printed in Thailand

Opinions expressed in this publication are those of the authors and do not necessarily coincide with any official views of Unesco. No expression of opinion is intended herein concerning the legal status or the delimitations of the frontiers of any country or territory.

BKR/79/BM/C 41-2800

CONTENTS

Chapter One : Scope and objectives of the case study . 1

Chapter Two : General background of the open-plan urban school 3

Chapter Three : Implementation of the national curriculum in the open-plan school building and the implications for physical arrangements 17

Chapter Four : Some characteristics of the neighbourhood community as revealed by the survey 23

Chapter Five : Possible areas of community participation in the open-plan school, organizational and planning strategies required and general recommendations 40

Chapter Six : Concluding comments 46

ANNEXES

Annex 1 : Survey Questionnaire 49

Annex 2 : Users' manual for the new Kompannaweediya school 51

LIST OF FIGURES

1. Ground floor plan 6

2. First floor plan 6

3. Second and third floor plan 8

4. Roof plan 8

LIST OF PLATES

1. The building, completed in 1976 iv

2. The adjacent, existing school 5

3. The low boundary wall serves as a seat, yet prevents access of wheeled vehicles 5

4. The building at ground level is open and a small, raised stage is provided for dancing and drama . . 9

5. Permanent concrete 'seats' in areas for reading and discussions 9

6. The internal brick wall and pin board of the library provide a display area 12

7. The space available on one floor for several teaching groups has not yet been divided . . . 21

8. Part of the space has a tiled floor and sink with taps. It can be used for science teaching . . . 21

9. The community 24

10. The flat roof with wired fence can be used for games 43

LIST OF TABLES

1. Enrolment in January, 1978 16

2. Former students classified by educational level attained 25

3. Former students classified by employment . . . 25

4. Former students classified by monthly income . . . 26

5. Households of former students classified by monthly income 26

6. Parents of former students classified by educational level attained 26

7. Parents of former students classified by employment . 27

8. Parents of present students classified by educational level attained (a sample of 20 households) . . . 27

9. Households of present students classified by monthly income (a sample of 20 households) . . . 27

10. Parents of present students classified by employment (a sample of 20 parents) 28

11. Parents classified by educational level attained (sample of 24 households having neither former students nor children currently enrolled in the open-plan school) 28

12. Households classified by monthly income 29

13. Parents classified by employment 29

14. Opinions of a sample of the community as to the usefulness of subjects in the curriculum current in 1978 30

15. Opinions of a sample of former students on the most useless subjects of the curriculum 31

16. Opinions of a sample of the community as to additional subjects which should be included in the curriculum 31

17. Opinions of a sample of former students on subjects that they would learn with interest if they could re-enrol in school 32

18. Opinions on the subjects that a sample of the community wish to see taught in evening/adult education classes 33

19. Opinions on the subjects that a sample of the community would wish to study if opportunity were to be provided 34

20. Opinions on the subjects that other members of the households in the study wish to learn . . . 35

21. Former students and their activities in and opinions on recreational and sports activities . . 36

22. Parents and households of present students and their activities in and opinions on recreational and sports activities 37

23. Parents and households having no students in the open-plan school: Their activities in and opinions on recreational and sports activities 38

24. Opinions of the sample of the community having education to Grade 9 and above, compared in respect of preferences for practical and academic subjects . 39

Plate 1. The building, completed in 1976

Chapter One

SCOPE AND OBJECTIVES OF THE CASE STUDY

In response to a request made by the Ministry of Education, the Asian Regional Institute for School Building Research, Colombo, designed, in 1970, an 'Open-Plan' school building for construction in Colombo. Extensive discussions between architects, engineers and educators culminated in the preparation of an education brief, an architectural brief and finally the relevant design drawings. Construction was commenced in 1971 and the buildings were completed in 1976 (Plate 1).

The present Study seeks to investigate the implications of the implementation of the 'Open-Plan' concept on education in the school, particularly with reference to national curricula, community-oriented programmes, teacher training and physical arrangements inside the building. Further, and in the light of these findings, it also seeks to formulate and present an educational programme for implementation in the school in the immediate future, taking into consideration the facilities already made available and the needs of community served.

The term 'Open-Plan', as used in the Study, is interpreted to mean that the school is open both to the pupils as well as to the rest of the community. Further, it means that the school building also provides flexible arrangements for teaching and learning such as unstructured and non-graded classes and various groupings of pupils. It is significant to note that this is a departure from the traditional Sri Lanka school building where instruction is provided to the pupils without much interaction with the community. In this context, the 'Open-Plan' can be considered as a significant educational innovation aimed at bridging the gap between schools and the local communities.

The findings of this Study despite the limitations in methodology and techniques used, are likely to provide useful clues to other developing countries in the region that have launched similar programmes of innovative building design for education. Further, this study is also likely to provide an understanding and awareness of the various organizational problems faced in the design and implementation of such an educational innovation. However, it must be emphasized that the findings have to be interpreted in terms of the various socio-economic and cultural situations of the countries in the region in order to make them meaningful and effective in a particular socio-economic context.

This Chapter is followed by Chapter Two which seeks to present a general background to the Open-Plan School Project and the various stages of its development from inception to its current status. Chapter Three deals with the implications of the implementation of the curricula programmes in the Open-Plan school and its demands on teacher training as well as on the arrangement of physical facilities within the building. Chapter Four explores the possible areas of community participation with a view to making optimum use of the facilities available in the school. Chapter Five presents prospects of the Open-Plan school for the future and Chapter Six is devoted to concluding comments.

The relevant information and statistical data for the Case Study have been obtained from records available in the school, from educational and architectural briefs for the Open-Plan school, and from a sample survey designed specifically for the purpose. This sample survey was conducted by interviewing selected families in the three wards of the school community, namely, Slave Island, Vekanda and Hunupitiya. The trained investigators comprised selected parents, members of Parent-Teacher Association (P.T.A.) and past pupils. This survey was aimed at establishing the socio-economic status of the community members, their educational background and their educational and vocational training needs and aspirations. Through identifying the basic learning needs of the community, programmes can be launched using the available resources of the Open-Plan school. The sample selected for survey is stratified in terms of family income, size of the family and ethnic grouping, etc. To this extent, it can be assumed to be representative.

The Study has been designed and prepared by Messrs. D.P. Wijegunasekera, D. Gunaratne and W.S. Perera of the Ministry of Education, Sri Lanka, under the guidance and the direction of the Secretary, Ministry of Education. The Principal and the staff of this Open-Plan school, members of the P.T.A., past pupils of the school, Messrs. C. Hettiarachchi and S.H.L. de Silva of the Ministry of Education helped in the organization and the work of surveying, referred to above. It is hoped that the findings of this Study will stimulate and provoke valuable discussion in the region and will shed some light upon the organizational problems that are likely to arise in designing and operating Open-Plan schools in other countries.

Chapter Two

GENERAL BACKGROUND OF THE OPEN-PLAN URBAN SCHOOL

Existing schools

Sri Lanka has about 9,600 schools each of which generally comprises a number of separate standard units such as classrooms, workshops and science laboratories. The accommodation provided depends on the location and the educational needs of the area. These buildings are basically designed to house conventional teaching programmes confined, by and large, to the school-going population and are thus invariably used for only 4 to 5 hours a day for formal education, except in locations where school-leavers programmes and adult centres have been organized. Viewed in this context, school buildings are under-utilized and do not provide much of a service to the community, other than the normal educational facilities for children. This tends to isolate the schools from the communities in which they are located.

Education is, however, increasingly conceived as a life-long process, confined neither exclusively to children of school-going age in time nor to the school in space. Viewed in the context of life-long education, schools cannot effectively function in isolation from the rest of the community where learning takes place both informally and non-formally. Hence there is a need to open schools to the communities concerned. Such integration would be to the mutual advantage of both schools and communities, particularly leading to education for all community members, both children, parents and others.

Inception of the new school

In 1970, the Sri Lanka Ministry of Education requested the Asian Regional Institute for School Building Research, Colombo, to prepare an education brief and an architect's brief for a new urban school. The education brief was based on the nature of the curricular programmes and the grades to be housed in the proposed school. The analysis of teaching space needs was based on the number of periods of each subject per week and on the average class size. In the preparation of the educational brief, efforts were made to increase the use of the each teaching space to the optimum.

The architect's brief was based on the likely enrolments, the grade span and the curricular programmes that were to be implemented. This was imperative as the design of any school building has to be based on its pupil population and on its educational programmes. The school was designed to accommodate approximately 700 children at one time, i.e. to accommodate two streams from Grades 1 to 9.

School and community

In the design of the building, community participation in its later use was given careful consideration. This was imperative as, when one provides accommodation which serves as housing (for a considerable time each day) for the younger group in a community, one should also be concerned about the whole community. A school should be a place for continuous exchange of information in the widest sense of the word. It should be inviting and, as far as possible, provide a meeting place for adults as well as for children to enable them to make acquaintance with the teaching programmes which have relevance to subject areas such as agriculture, sanitation, craft-work and, in fact, to their own environment. The building has been designed for maximum flexibility and can be adapted to the many changes which will be desirable and are bound to occur during its useful life.

The building and site

The educational and the architectural brief were studied and discussed by educators and the architects and finally, designs were prepared 1/. The construction programme commenced in 1971 and was completed in 1976. The new school was built on open land beside an existing school at No. 60, Sir James Peiris Mawatha, Colombo-2 (Plate 2). The location of this school is in the close proximity to the commercial and administrative centre of Colombo. The construction work was carried out by the State Engineering Corporation under the guidance of the Director of School Works, Ministry of Education, Sri Lanka.

The site of the building is surrounded by a 1 foot high and 1 foot wide wall which serves as a seat and prevents bullock-carts and motor cars from using the school site as a parking lot (Plate 3). This low wall has been specially designed to make the school open to the Community. The conventional type of high wall surrounding the traditional school shows the community that the school does not have a relationship with it - something which is contrary to the basic philosophy of the Open-Plan school. A high wall is a negation of the very concept of openness and it tends to isolate the school from the rest of the community. The school should be as open to the community as possible in order to make the teaching as rewarding as possible for the students who live in the neighbourhood and contribute to the welfare of the community to which they belong. Hence, the absence of a high boundary wall is vital to the concept of the project.

1/ An unusual feature of the design material prepared in 1970 was the production by the designer, Mr. Aryan Sikkema (Unesco), of a Users' Manual for the building. This Manual was re-printed and distributed at the Workshop on the use of the school, referred to later in this Chapter. The Manual is given as an Annex to this Report.

Plate 2. The adjacent, existing school

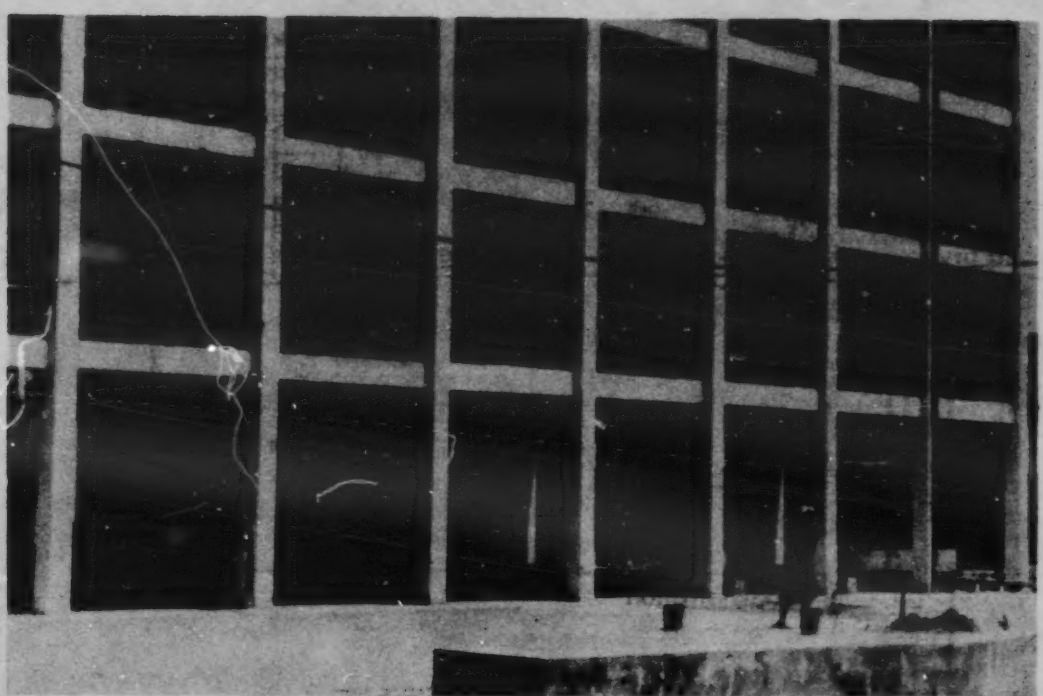


Plate 3. The low boundary wall serves as a seat yet prevents access of wheeled vehicles

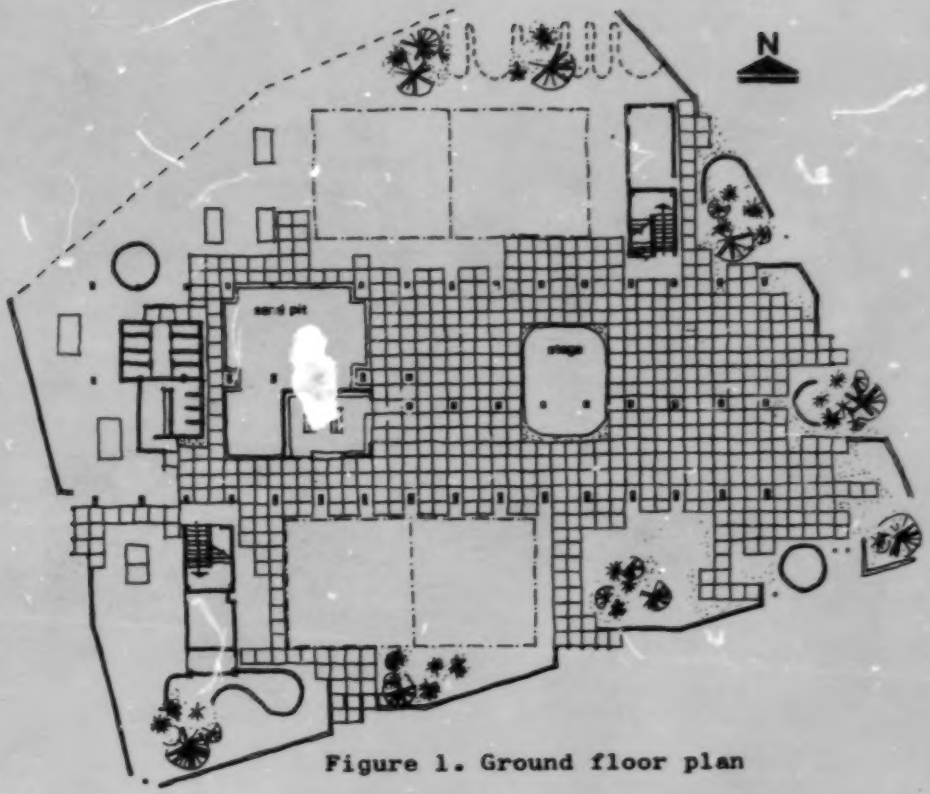


Figure 1. Ground floor plan

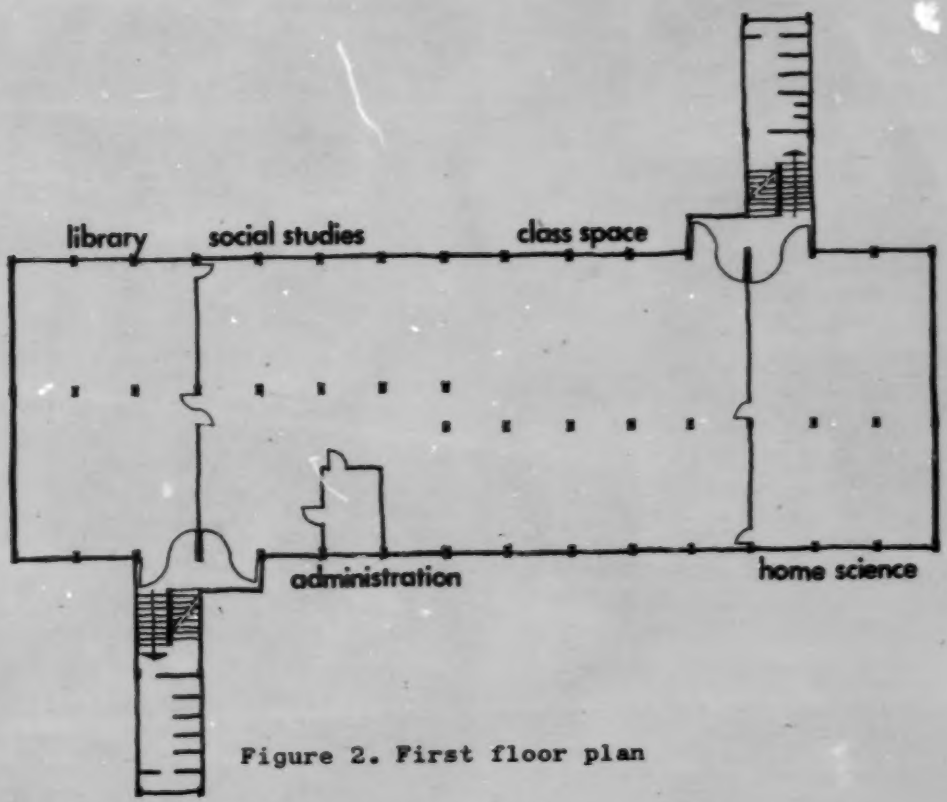


Figure 2. First floor plan

The building comprises 5 working levels as indicated below:-

Ground floor	-	open (shaded)	(Figure 1)
First floor	-	closed	(Figure 2)
Second floor	-	closed	(Figure 3)
Third floor	-	closed	(Figure 4)
Roof			

The entire building apart from the toilet, store and shop contains only the following enclosed, lockable spaces:

Library

Art room

Home Science laboratory and

School Conference room

The building can accommodate approximately 700 children at one time i.e. two streams from Grade I to Grade 9. The first floor has been planned to accommodate the library, art room, social studies room, administration, staff room, conference room, two class spaces and a home science laboratory. The second floor, is planned to accommodate 4 class spaces, a multi-science and a workshop area. The third floor has been planned to provide space for 10 classes of primary grades 1 to 5. Enclosed showers have been provided in the ground floor, separately for boys and girls, to be used after physical education, or gardening, and as a part of the health education programme. The showers could also be used as public bathing places for the community, which could substantially contribute to their maintenance. Some storage accommodation has also been provided at the ground floor under the staircase and toilet block for equipment used for agriculture and physical education and for furniture. A special space under the south-western toilet block is designated for short-term garbage storage. Apart from these enclosed places, the site is completely open and the following activities have been planned for in the original design: physical education (2 paved areas for volley ball), assembly, large group teaching of subjects such as music, dancing, drama (Plate 4), seminars, discussions, outside reading (Plate 5). The whole site can be used for the study of geography and mathematics, for example, measuring and preparing maps etc. For activities on the site and in the library and the home economics laboratory, the facility should be opened to the public under proper supervision and direction after school hours.

The flat roof is accessible and can be used for play, physical education, volley ball, basket ball, children's shows and dancing.

<u>The open plan</u>

There are only a few internal brick walls in the Open-Plan school. Separation of spaces will be achieved (see sketches in

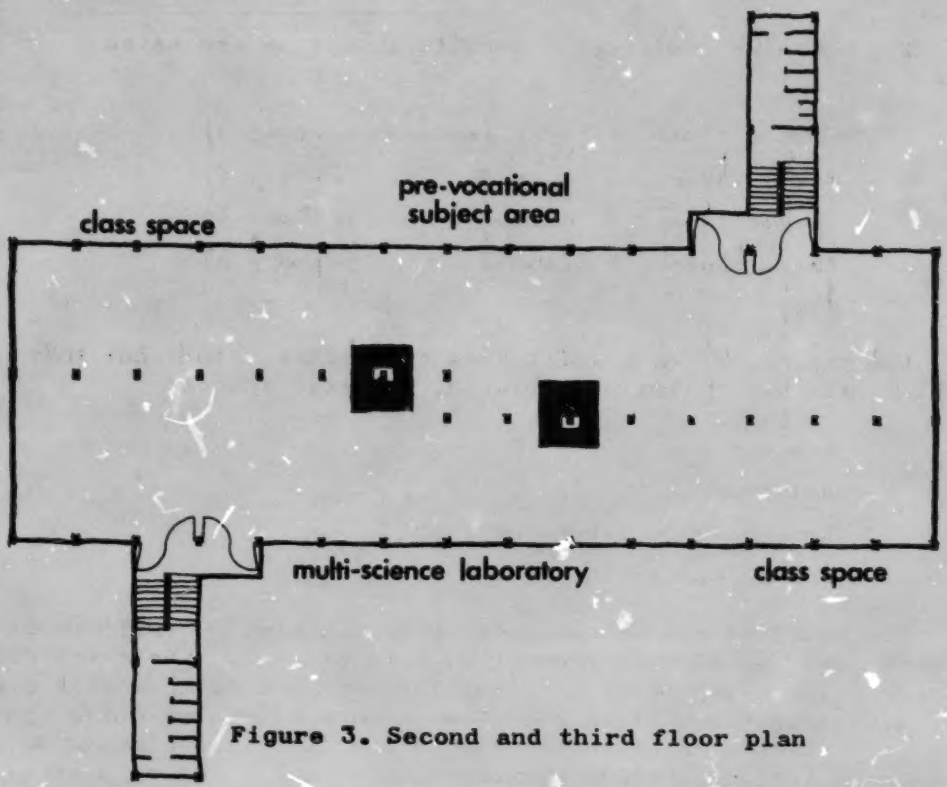


Figure 3. Second and third floor plan

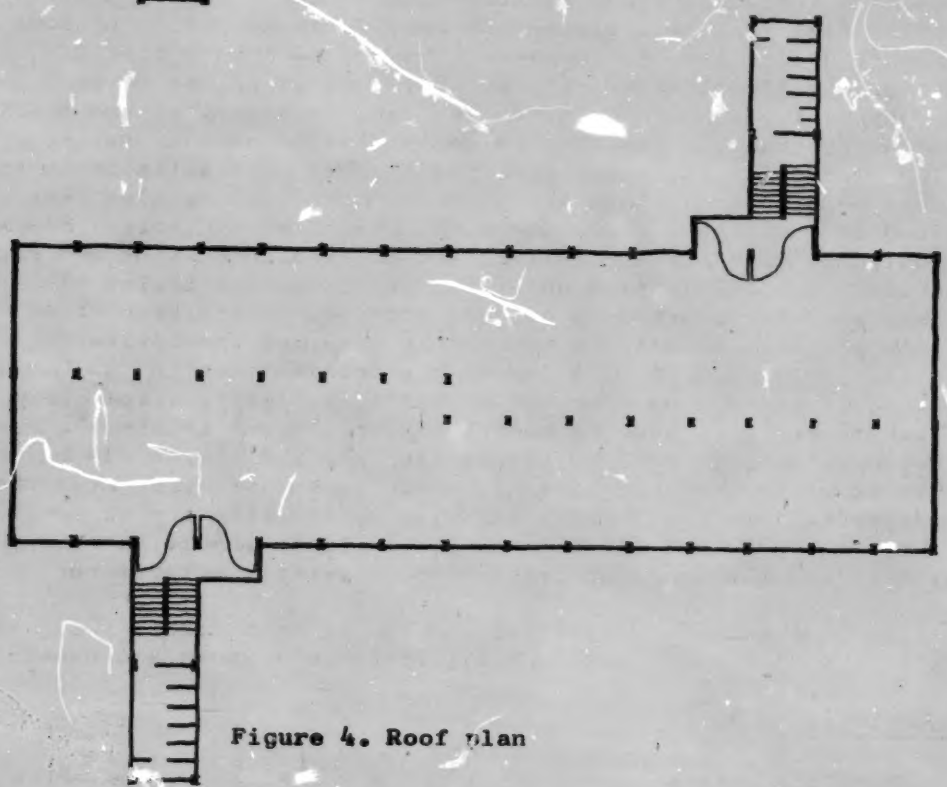


Figure 4. Roof plan

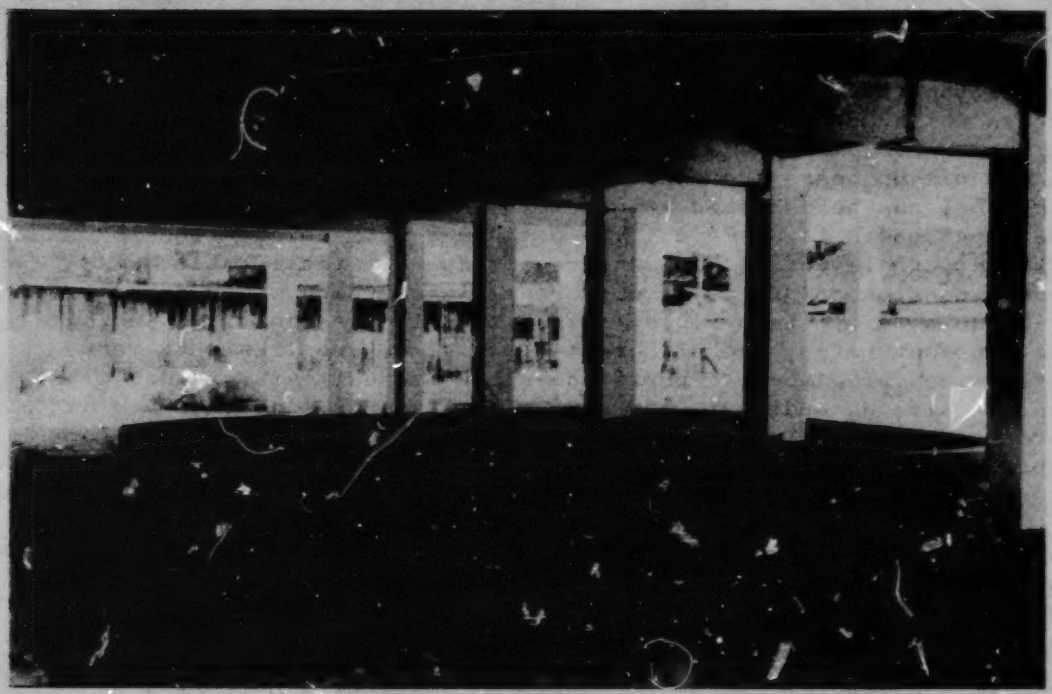


Plate 4. The building at ground level is open and a small raised stage is provided for dancing and drama

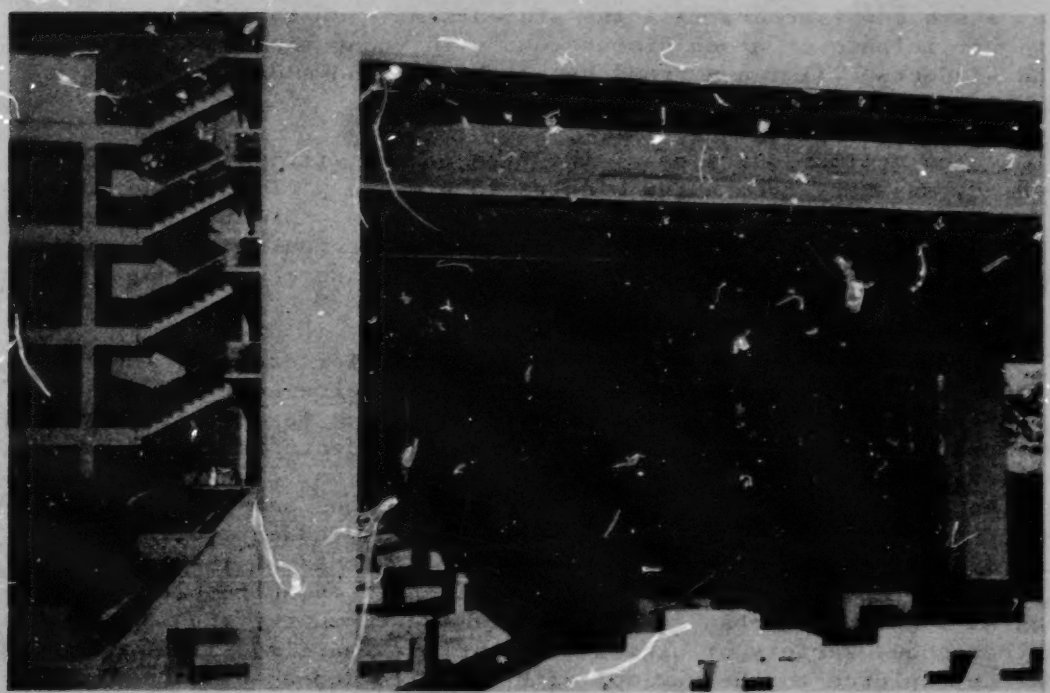


Plate 5. Permanent concrete 'seats' in areas for reading and discussions

Annex 4) mainly by movable partitions, movable screens, chalk-boards, storage units, and curtains. Another type of movable partition that could be introduced is a panel hung between two posts which are wedged between ceilings and floor by tightening a bolt. For example, a chalk-board can form one side of the panel and a pin-up board the other. These panels, which are visual screens, can be unhooked immediately when a larger space or a view between spaces is desired. The posts may be removed either by students or teachers. This space arrangement facilitates the accommodation of groups of different sizes, which would not otherwise be possible in a rigid, or traditional classroom. Depending on drop-out rates, the different class sizes are likely to vary over time. The movable partition allows adjustments of the "class-space" size according to the number of students, and thus avoids over crowding in large classes and under-utilization of classroom space when there are only a few students in a teaching group.

Each type of learning activity might have its optimum group-size, depending on whether it is individual study, a discussion group of 2 to 6 students, group work, seminars of 15-30 students or lectures. Students can also be grouped according to their ability, achievement or interest. This sort of flexible arrangement facilitates the use of different, innovative teaching techniques. The open nature of the teaching spaces available, will also change the teachers traditional role to that of a manager of a learning process, a counsellor and a motivator. When a teacher is absent, the partitions between any two classes can be removed and two classes can share one teacher. All the students may assist the teachers and participate in group discussions with young students. Teacher and students will learn from one another and have discussions on problems of common interest.

The optimum duration of the type of activity within a class period, may vary from a few minutes to a whole period depending on group size, complexity and way of presentation. Similarly, the optimum group size may also vary during one period. Students will move between different spaces and sizes of space can be adapted and students re-grouped around moved furniture.

Facilities available in the community, for example, the Public Library, Museum, factories, offices, parks, Beira Lake and the Sea (both nearby) and the harbour provide resources for learning by direct observation. Shops can be visited by the students for purposes of observation and study. Students can also garden, clean the streets of the neighbourhood, paint houses, street signs and perform any other community service which will be not only educative, but also improve school-community relationships. Students of the school can teach their parents, or play with small children while parents are out at work. The urban environment of the community thus presents a tremendous variety of useful and relevant learning situations which can be explored to the maximum, with a little degree of ingenuity and resourcefulness on the part of the Head of the school and the staff.

Access for the community

The library and art room are separated from the rest of the first floor by an internal wall. Because of the design of the access, there are several ways in which the spaces may be used, such as:

i) The library can be opened both for the public and for the students while the whole school remains closed in the evening, or

ii) the school can be opened and the library closed when there is no librarian, or

iii) the school and the library can be opened simultaneously.

The internal brick wall and pin boards provide a display area for students' work, notices etc. (Plate 6).

The Home-Science laboratory can also be used both by the students and by the members of the public. It can be closed while the school is opened and when there is no Home-Science teacher or location. Adult Education and other community activities are possible within the Home-Science area. Again, the access is designed for school or community use.

The social studies area has ample storage space, part of which may be used to establish a museum or a collection of relevant items found by students. The administration and staff-room is an open area except for a small conference room which is enclosed. This is meant for confidential discussion and not as the Principal's office. There is also provision for a relaxation area for the teaching staff. The custodial staff can relax in an area near the North-East entrance next to the cleaning store. The office accommodates the Principal, his deputy and other supporting staff.

A workshop on the use of the new school

In 1977, the Ministry of Education in collaboration with the Unesco Regional Office for Education in Asia and Oceania, on the completion of the construction of the Open-Plan school, organized in Colombo a workshop on the modalities of operating the Open-Plan building as a school for grades 1 to 10 classes and for the community. The location of the workshop was the school itself, and the participants included representatives from the Unesco Regional Office in Bangkok, selected officials of the Ministry of Education, the Principal of the School, teaching staff and some representatives of the P.T.A. The primary purpose of the workshop was to discuss and prepare a plan for the utilization of the Open-Plan school, both by the students as well as by the community members. The detailed plan of the workshop was to prepare elements such as floor plans, lists of equipment and furniture and other relevant information required for organizing the operation of the school for the first 6 months of the experimental period, based

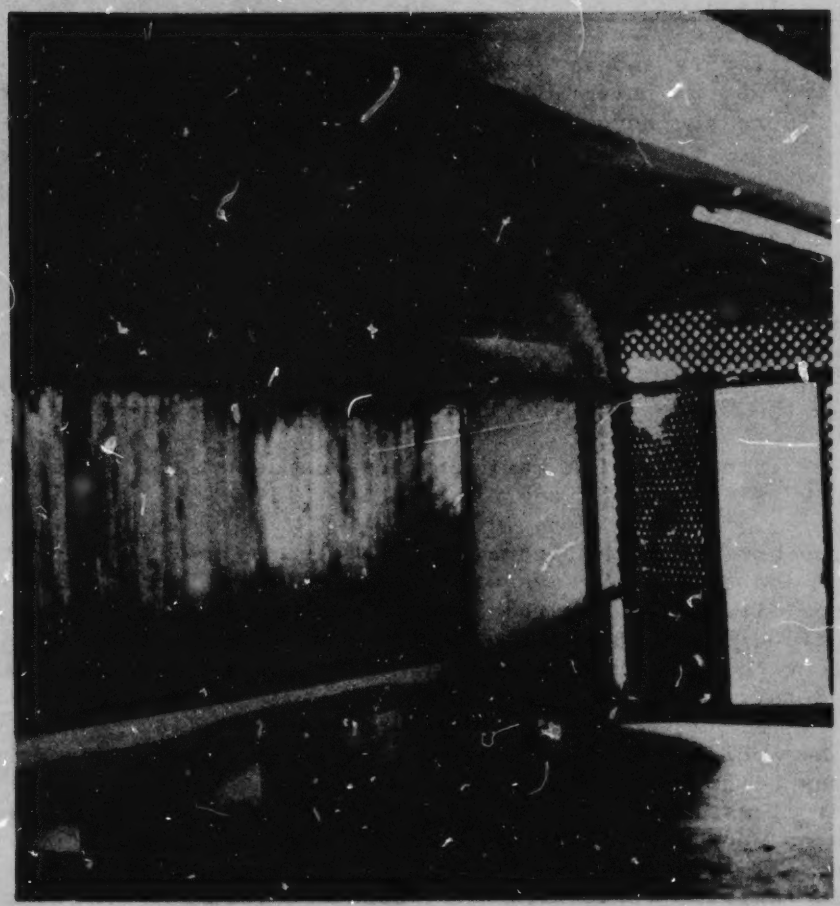


Plate 6. The internal brick wall and pin board of the library provide a display area

on the learning objectives and defined methods of teaching. The workshop included several presentations as follows:-

1. The curriculum of grades 1 to 9 and modalities of teaching and learning.

2. Methods of teaching - a review.

3. Implications of curriculum and teaching/learning for facilities.

4. Comparison of facilities - the part-Open-Plan and the conventional school.

5. Report on experiences in the operation of open-plan schools.

These presentations were followed by discussions which culminated in the preparation of a final report, incorporating several recommendations for future implementation. The significance of this meeting was that it provided a valuable forum for all those concerned in the operation of the school to discuss the various aspects of its organization and the likely problems in its implementation. Lists of equipment required for the teaching of subjects such as aesthetic studies, physical education, pre-vocational studies and integrated science were prepared for incorporation in the final report, the recommendations of which were:

1. That the primary section should be organized as two non-graded vertical groups. The lower group to consist of Grades 1 and 2; the higher group of Grades 3, 4 and 5.

2. That provision be made to establish (a) 'Centres of interest' for Art, Creative work, Languages and environmental studies; (b) 'Reading Corners' so that children may move from 'home base' for individual study when necessary; (c) A 'Resources Centre' fully equipped with an abundant supply of reference material and other aids to learners.

3. That a specialist teacher be appointed to assist the other teachers in Aesthetic Studies in the Primary Section.

4. That a well planned remedial assistance programme be administered after normal school hours so that at fixed times the students could return to school for guidance and assistance. Additional staff to be provided for this purpose.

5. That a Headmaster/Mistress be appointed to the Primary Section and that he or she be assisted by two sectional heads or leaders.

6. That in the Junior Secondary section, well-defined subject areas be established to which the children could move from 'home base' for vital subject studies.

7. That modern teaching/learning techniques such as team teaching, peer group learning and activity-based situations should receive pride of place over the techniques of the traditional classroom.

8. That the present rigid statutory requirements in terms of teachers' work load and hours of work should be revised in view of the high degree of community involvement envisaged in the project plan.

9. That an effective administrative echelon be organized in the school with two deputy principals of whom one would be in charge of the community aspect. A sufficient number of sectional heads to be appointed to assist them.

10. That a Welfare Board comprising representatives of the community, P.T.A. and other well-wishers, be established and take necessary measures to ensure the security of the open site, building, furniture and equipment.

11. That an annual school budget be prepared for the maintenance of buildings, supply of equipment, and services and the necessary financial allocation made.

12. That a special training and orientation programme be organized for the tutorial staff and preferably for the Welfare Board as well.

13. That a community programme of a cultural and recreational nature be organized to establish rapport with the community, as a prelude to increasing school inter-action with the community.

14. That a comprehensive socio-economic survey of the area served by the school be conducted with a view to:

    a) evaluating the resources available in the community;

    b) identifying the socio-economic problems of the community;

    c) studying the attitudes, aspirations and needs of the people in the community.

15. That a Standing Advisory Committee, comprising representatives of the Ministry of Education, the Regional Department of Education, the Curriculum Development Centre and the school, be set up to serve and function as an advisory and consultative body.

The Ministry of Education has taken note of these recommendations and has appointed a Committee comprising selected representatives of the Ministry of Education, Regional Department of Education, Curriculum Development Centre, Principal of the School, Selected members of the staff and the Director of School Works, Ministry of Education. The Advisory Committee has been charged with implementing the recommendations, arrived at the workshop, where feasible.

The school programme and the educational reforms

However, in the implementation of these recommendations, due consideration would be given to the educational reforms introduced by the Government and the resulting implications of their implementation in the Open-Plan school. The implementation of the recommendations should, in short, be studied in the light of the curricula and structural changes in the system. The survey conducted for the purpose of this study was based on the recommendations made in this regard at the Workshop referred to above. The findings of this study would provide a framework for the organization of future, community-oriented, educational programmes in the school.

The new Open-Plan school was first organized for teaching in January 1978. At present it has classes covering grades 1-10. The respective enrolments of these classes are shown in Table 1.

The school has a total teaching staff of 34 including two science-trained teachers, three mathematics-trained teachers and three English-trained teachers. The environmentally-oriented, activity-based, primary curricular programme is being implemented in the primary grades (1-5). The Junior Secondary programme that is being implemented (grades 6-10) consists of a common curriculum.

The programme of study leads to the General Certificate of Education (Ordinary Level Examination). The students can offer up to a maximum of 8 subjects but should obtain pass standards in a minimum of six subjects inclusive of First Language (Sinhala/Tamil), which is compulsory. The teaching of integrated Science and Technical subjects in these grades requires the provision of a science laboratory and workshop facilities. Areas for the purpose are available in the building for appropriate transformation. The implications of the implementation of the above national curriculum is discussed at length in Chapter Three.

Those attending the school belong to two groups, namely Sinhala and Muslim, the former being the majority. The medium of instruction is Sinhala. These students have their households located in the three wards, Kompannaweediya, Wekanda and Hunupitiya. The survey conducted for the purpose of the study covered a representative sample of these students as well as their parents.

TABLE 1. ENROLMENT IN JANUARY 1978[2/]

Grade	Boys	Girls	Total
Lower Grade 1A	20	24	44
1B	26	18	44
Grade 1A	27	27	54
1B	27	28	55
1C	25	29	54
2A	22	15	37
2B	22	14	36
2C	22	16	38
2D	20	13	33
3A	15	18	33
3B	18	16	34
3C	15	21	36
4A	16	18	34
4B	22	13	35
4C	17	15	32
5A	15	14	29
5B	18	18	36
6A	14	22	36
6B	17	22	39
7A	14	22	36
7B	18	17	35
8A	13	14	27
8B	16	14	30
9A	12	13	25
9B	15	11	26
10A	11	6	17
10B	30	6	36
Total	507	464	971

2/ It will be noted that, although the school was designed to accommodate some 700 students in two streams, by 1978, the enrolment and streams in each grade had increased far beyond the design capacity of the facility.

Chapter Three

IMPLEMENTATION OF THE NATIONAL CURRICULUM IN THE OPEN-PLAN SCHOOL BUILDING AND THE IMPLICATIONS FOR PHYSICAL ARRANGEMENTS

The characteristic features of the national curriculum

During the last three decades the structure of the education system and the content and methodology of instruction in the schools have undergone marked changes in response to measures designed and implemented for the qualitative and quantitative development of education. The continuation of national efforts directed towards the provision of equal opportunities resulted in the introduction of curricula with common components. Under the reforms introduced in 1972, the structure of the system is characterized by a primary cycle consisting of grades 1-5, a junior secondary cycle consisting of grades 6-10 and a senior secondary cycle of grades 11 and 12.

Primary education

The primary education programme, grades 1-5, is designed to provide learning experiences through activity-based, environment-oriented methods which offer opportunities for active child participation in the teaching-learning situation. Curricular areas which are traditionally treated as separate disciplines are integrated through a thematic approach. The themes are developed into a spiral sequence which increases in depth as the child progresses through the grades. The themes selected are:-

i) our houses and their inhabitants;

ii) things we eat;

iii) things we wear;

iv) means for our work;

v) we are different but united;

vi) our environment;

vii) people who help us;

viii) our means of transport and communication;

School and community

ix) our earth and its surroundings;

x) things we see and hear.

Children learn basic skills in reading, writing, communication, number and other areas through participation in activities built round the selected themes.

Junior secondary education

The junior secondary programme includes grades 6-10 and constitutes the terminal segment leading to the General Certificate of Education (Ordinary level) Examination. All the students follow a common curriculum consisting of:-

i) Mother tongue (Sinhala/Tamil);

ii) religion;

iii) English;

iv) aesthetic studies (art/music/dancing);

v) mathematics;

vi) science;

vii) social studies;

viii) health science and physical education;

ix) technical subject;

x) link language (Sinhala/Tamil).

Although a complete integration of the curriculum has not been possible, a high degree of decompartmentalization of subjects has been achieved in such areas as science and social studies. Earlier, physics, chemistry and biology were taught in place of science, and history, geography and civics preserved their separate identities without becoming merged in the single discipline, Social Studies. The Technical subjects offer the schools an opportunity to select one from a number of specified subjects. All the subjects listed above, with the exception of the technical subject, which is selected by the schools, are common elements of the junior secondary curriculum.

Senior secondary education

The senior secondary programme covers grades 11-12. The curriculum has two main streams, namely, arts and science, leading to the General Certificate of Education (Advanced Level) Examination.

Consideration of possibilities and constraints

The exact nature of learning and the precise conditions under which learning takes place in varying situations are not fully known, despite the volume of research findings. Interaction between the learner and a mediator in a psychological environment which is unique to the learner may result in a mode of behaviour which may manifest itself soon after the interaction or after a time lag. The psychological environment of the learner is fashioned by a spectrum of factors operating in the home background and in the learning situation. Difficulties of identification of the factors and quantification of their contributions have been compounded by the 'variability' of the interaction between the learner and the teacher/mediator. A method which succeeds when used by one teacher may fail in the hands of another. Even the same teacher using the same method for presenting the same content area may get different responses from two groups of students coming from different backgrounds. Attempts at structuring a favourable teaching-learning situation should be guided by consideration of the background and level of the average students, the subject matter to be taught, the depth of treatment of the subject matter and the competencies of teacher/mediator. The failure to comprehend fully the nature of learning serves to underline the need to refrain from pontificating on instructional modalities. And one should approach the question of utilization of facilities available in an open-plan building complex with a mind neither committed to a set of particular modalities nor unwilling to explore and learn from experience.

It is well known that children proceed in their studies at different paces, depending on a host of factors ranging from intellectual and physical development to motivation and aspirations. All children, therefore, cannot master a given quantum of subject matter which is presented in the same manner and in the same length of time. Non-graded vertical grouping helps students to move at paces more suited to their various stages of development and levels of attainment. According to the principle of non-graded, vertical grouping, children are divided, not into grade-oriented classes, but into groups which may be further divided into sub-groups. One teacher may be in-charge of one or more sub-groups. Transfer of children between sub-groups and between groups enables the slow and fast learners to master the content of the curriculum at their own pace. The absence of physical barriers between groups and frequent consultation among teachers facilitates the transfer of children from one group to another.

The barriers between subjects and the barriers between grades are mainly due to factors within the education system. In Sri Lanka, education is centrally controlled, and curricula are prepared by the Curriculum Development Centre of the Education Ministry. All state-managed schools, which constitute more than 95% of all schools, are required to implement the centrally prepared curricula according to a time schedule indicated by the Ministry - the number of periods/week allotted to each subject being prescribed. Further, all schools, whether they be public

or private, preparing candidates for the public examinations at the end of the junior and senior secondary cycles, must adhere to examination syllabuses prepared by the Department of Examinations. The centrally prepared curricula and the public examinations tend to encourage the adoption of a uniform pattern of teaching in junior and senior secondary schools. In planning for the use of an open-plan school building, the constraints operating both within and without the school system should be considered fully with a view to devising a scheme for the rationalization of the use of the infrastructure facilities available.

An approach to the utilization of the infrastructure facilities of the open-plan building of Kompannaweediya school

Kompannaweediya school has an open-plan, multi-storeyed building. Each floor of the school building (except the ground floor) provides a large space in which a number of classes are accommodated without separating brick walls. Although separation of classes is possible by the installation of movable partitions, no such separation has so far been effected (Plate 7). The part of the building which was intended to be used as a science laboratory is fitted with four large sinks and taps, and the concrete floor below the sinks is paved with tiles (Plate 8). This particular part merges in the rest of the building almost imperceptibly due to the absence of any kind of partition and science seems to be taught in the classes in the same manner as the other subjects.

The notion of the open-plan school building is new to the Sri Lanka context and in the following section, some uses to which the open-plan building of the school may be put are outlined.

Implementing the curriculum in the Primary and Junior Secondary sections of the school

The school has a primary section with grades 1-5 and a junior secondary section with grades 6-10. Grades 1 and 2 have three parallel classes each, while each of the other grades has two parallel classes. The most noticeable difference between the curricula of the primary and junior secondary cycles is the complete integration of subjects in the primary curriculum and the lack of such integration in the Junior Secondary curriculum. For this reason, curriculum-implementation in the two sections is considered separately.

Curriculum-implementation in the Primary Section

As mentioned before, ten themes have been selected for the integration of the primary curriculum. The same themes are dealt with in increasing depth as the child progresses through the grades. This particular thematic approach lends itself easily to instruction according to non-graded vertical grouping of students. However, non-graded vertical grouping has to be extended gradually. At the initial stage of non-grading, students in grades 1 and 2 may be combined to form a non-graded group divided into sub-groups according to the progress achieved.

Plate 7. The space available on one floor for several teaching groups has not yet been divided

Plate 8. Part of the space has a tiled floor and sink with taps. It can be used for science teaching

Students can move from one group to another if the teachers involved in instructing them feel that such movement is beneficial.

The primary teachers are specially trained for implementing the integrated curriculum. With further in-service training, they can be equipped for teaching students in non-graded groups. The Curriculum Development Centre has already introduced non-graded, vertical grouping into a few selected schools on a pilot scale. Therefore, the training of teachers in the Kompannaweediya school should not be a difficult task. Students forming the non-graded groups should be accommodated on the same floor. After gaining enough experience and confidence, non-graded grouping can be extended to the other grades of the primary cycle until the whole primary section of the school becomes one un-graded primary school. If temporary separation of the main groups becomes necessary for particular activities, movable partitions in the form of panels or screens may be brought into the required positions and removed when separation is unnecessary or undesirable.

Curriculum-implementation in the Junior Secondary Section

Unlike the primary cycle, the Junior Secondary curriculum is divided into ten subject areas and the services of several teachers are required for implementing it in each grade. However, the principle of non-graded grouping can be used in teaching a few subjects such as science and mathematics where the same themes recur at different grade levels. At the initial stage, grades 6 and 7 may be combined to form a non-graded group for teaching these two subjects. For this purpose, the classes at Grades 6 and 7 level should be accommodated on the same floor so that, during the mathematics period, the four classes involved can form one non-graded group which can then be divided into several sub-groups. The time-table should be so arranged to make this possible. Further it is preferable to accommodate the classes involved close to the science area so that, during the science period, the movable partition which separates the science area from these classes may be removed. Division of the non-graded group into sub-groups enables students to grasp concepts in mathematics and science at a pace which is related to the achievement levels in these subject areas.

The teachers of science and mathematics have to be trained for teaching in grades 6 and 7 according to the principle of non-graded vertical grouping. So far, non-graded vertical grouping has not been attempted in any post-primary school in Sri Lanka. Therefore, particular attention has to be paid to the question of training. If non-graded grouping succeeds, it can be extended to embrace grade 8 so that, ultimately, grades 6-8 form one non-graded group for instruction in science and mathematics. Similarly, grades 9 and 10 can be combined to form another non-graded group. Grades 9 and 10 form the examination grades of the junior secondary cycle and for this reason the formation of a non-graded group with sub-divisions should be less difficult than the non-graded grouping of students in grades 6-8.

Chapter Four

SOME CHARACTERISTICS OF THE NEIGHBOURHOOD COMMUNITY AS REVEALED BY THE SURVEY

Methodology

As outlined in Chapter One, the survey was conducted in the three wards, Kompannaweediya, Wekanda and Hunupitiya, by trained interviewers selected for the purpose. The sample covered 74 households. This sample was stratified on the basis of family income, size of family, parents education and ethnic origin. The survey-questionnaires were administered to 3 groups, namely, former students, parents of students presently attending school and households which have neither past students nor students attending the school at present. The questionnaires used in this connection are presented in Annexes 1, 2 and 3.

In eight households out of the 74 surveyed (10%) the former students as well as parents were interviewed as these parents are presently sending some of their children to the Kompannaweediya school. The households had 104 former students of which 33 (15 males and 18 females) were interviewed.

There were 222 adults, including parents but excluding former students, in the 50 households which had at least one of the categories, namely, former students or present students. The other 24 households had 92 adults. In the entire sample there were 314 adults (excluding former students) 77 present students, 98 students from other schools and 13 children under five years of age. The 77 present students came from 34 households. The present total enrolment of the school is 971, and the sub-sample used covered 8% of the enrolment. The sub-sample of 34 households could be considered as fairly representative as far as student numbers are concerned. The respondents gave more than one response to some questions such as their choice of subjects in school. In such cases the total response counts including nil responses exceeded the number of respondents3/.

3/ Only one of the former students of a household who was a parent was interviewed for purposes of record, except in two cases where the household had former student couples. Their responses were included as those of former students, ignoring their major role as parents.

Plate 9. The community

Some general characteristics of the households surveyed

The 74 households surveyed were located in thickly populated urban slum areas (Plate 9). The characteristic features of the households were the large family size, low income of parents and limited housing accommodation. Most of the households had no electricity. The pipe-borne water supply was inadequate and many households had to get water from a common tap. It is also noteworthy that there were only 13 children under 5 years of age in the whole sample. 16 of the 33 former students interviewed (50%) had studied up to at least Grade 9 giving a median grade-level attainment of 8 plus.

The survey findings as elicited by the questionnaires are tabulated below. For the sake of completeness, responses to all the items in the questionnaire are recorded irrespective of their subsequent use in the analysis presented in Chapter Five.

TABLE 2. FORMER STUDENTS CLASSIFIED BY EDUCATIONAL LEVEL ATTAINED

Sex	Educational level attained											
	SSC(1)	GCE(2)	Grade 10	NCGE(3)	Grades							
					9	8	7	6	5	4	3	Not stated
Male	15	4	2	4	0	2	1	0	1	0	0	1
Female	18	0	3	0	3	3	2	2	0	3	1	1
Total	33	4	5	4	3	5	3	2	1	3	1	2

(1) SSC = Senior School Certificate
(2) GCE = General Certificate of Education
(3) NCGE = National Certificate of General Education

TABLE 3. FORMER STUDENTS CLASSIFIED BY EMPLOYMENT

Sex	Employment					
	Mason	Clerk	Peon	Labourer	Unemployed	Not stated
Male	1	1	1	2	9	1
Female	0	0	0	1	16	1
Total	1	1	1	3	25	2

TABLE 4. FORMER STUDENTS CLASSIFIED BY MONTHLY INCOME

Sex	Receiving income in rupees		
	Less than Rs. 200	From Rs. 200 to Rs. 300	Not stated or nil
Male	2	3	10
Female	0	1	17
Total	2	4	27

TABLE 5. HOUSEHOLDS OF FORMER STUDENTS CLASSIFIED BY MONTHLY INCOME

Number of households receiving income					
Unstated	Less than Rs 200	From Rs 200 to Rs 300	From Rs 301 to Rs 400	From Rs 401 to Rs 600	More than Rs 600
5	1	7	8	4	5

TABLE 6. PARENTS OF FORMER STUDENTS CLASSIFIED BY EDUCATIONAL LEVEL ATTAINED

Parent(1)	Grade at which left school							
	10	9	8	7	6	5	4	Unstated
Father	2	1	4	3	1	6	1	10
Mother	0	0	6	3	4	5	1	9
Total	2	1	10	6	5	11	2	19

(1) Two former students were parents.

TABLE 7. PARENTS OF FORMER STUDENTS CLASSIFIED BY EMPLOYMENT

Parent	Employment									
	Driver	Labourer	Mechanic	Waiter	Peon	Carpenter	Pensioner	Businessman	Unemployed	Unstated
Father	6	5	1	1	2	1	1	1	2	8
Mother	0	3	0	0	0	0	0	0	5	20
Total	6	8	1	1	2	1	1	1	7	28

TABLE 8. PARENTS OF PRESENT STUDENTS CLASSIFIED BY EDUCATIONAL LEVEL ATTAINED (a sample of 20 households)

Parent	Grade at which left school										
	12	10	9	8	7	6	5	4	3	2	Unstated
Father	1	2	0	3	5	1	1	1	0	0	6
Mother	0	0	1	2	1	2	6	3	0	1	4
Total	1	2	1	5	6	3	7	4	0	1	10

TABLE 9. HOUSEHOLDS OF PRESENT STUDENTS CLASSIFIED BY MONTHLY INCOME (a sample of 20 households)

Number of households receiving income					
Unstated	Less than Rs 200	From Rs 200 to Rs 300	From Rs 301 to Rs 400	From Rs 401 to Rs 600	More than Rs 600
1	3	5	5	3	3

TABLE 10. PARENTS OF PRESENT STUDENTS CLASSIFIED BY EMPLOYMENT (a sample of 20 parents)

Parents	Employment								
	Driver	Plantation Supdt.	Clerk	Attendant	Businessmen	Peon	Labourer	Vendor	Unstated
Father	3	1	1	1	1	1	2	4	6
Mother	-	-	-	-	-	-	1	-	18 (1 dead)
Total	3	1	1	1	1	1	3	4	24

Tables 11, 12 and 13 record data for households in the community having neither former students nor children currently enrolled in the Open-Plan school.

TABLE 11. PARENTS CLASSIFIED BY EDUCATIONAL LEVEL ATTAINED

Parents	Grade at which left school								
	10	9	8	7	6	5	4	3	Unstated
Father	5	-	5	5	2	3	-	1	3
Mother	6	1	4	1	-	5	-	2	5
Total	11	1	9	6	2	8	-	3	8

TABLE 12. HOUSEHOLDS CLASSIFIED BY MONTHLY INCOME

Number of households receiving income					
Unstated	Less than Rs 200	From Rs 200 to Rs 300	From Rs 301 to Rs 400	From Rs 401 to Rs 600	More than Rs 600
3	1	7	9	0	4

TABLE 13. PARENTS CLASSIFIED BY EMPLOYMENT

Parents	Employment											
	Typist	Clerk	Police Sergeant	Postal Sorter	Transport Agent	Welder	Peon	Vendor	Mechanic	Labourer	Unemployed	Unstated
Father	1	1	3	1	1	1	1	3	2	5	2	3
Mother	-	1	-	-	-	-	-	-	-	1	2	20
Total	1	2	3	1	1	1	1	3	2	6	4	23

<u>The view of the community regarding the contents of the school curriculum</u>

The survey results are tabulated below. (The responses are indicated under each category). The following are records of free responses. No check list of subjects or activities was used.

TABLE 14. OPINIONS OF A SAMPLE OF THE COMMUNITY AS TO THE USEFULNESS OF SUBJECTS IN THE CURRICULUM CURRENT IN 1978

Subject	Number of community members finding subject useful			Total
	Former students	Parents of present students	Other parents	
Health	1	1	1	3
Weaving	1	0	0	1
Sewing	3	1	0	4
Book-binding	1	0	2	3
Mathematics	4	5	4	13
English	7	5	1	13
Science	0	4	0	4
Buddhism	1	0	1	2
Home Science	0	1	1	2
Commerce	0	1	5	6
Sinhala	2	3	0	5
Drawing/Art	0	1	0	1
Handicraft Technical	3	0	1	4
Pre-vocational Carpentry	1	0	0	1
No useful subjects	0	1	0	1
No opinion	9	5	10	24

TABLE 15. OPINIONS OF A SAMPLE OF FORMER STUDENTS ON THE MOST USELESS SUBJECTS OF THE CURRICULUM

Subject	Number of former students of the opinion the subject is useless
Pali	2
Civics	1
Literature	1
Mathematics	2
Academic subjects	1
No opinion	24

TABLE 16. OPINIONS OF A SAMPLE OF THE COMMUNITY AS TO ADDITIONAL SUBJECTS WHICH SHOULD BE INCLUDED IN THE CURRICULUM

Additional subject	Number of community members opting for additional subject			Total
	Former students	Parent of former students	Other parents	
Handicraft Mechanical Technical Vocational Pre-vocational	9	7	10	26
Sewing Batik work Weaving	7	7	2	16
English*	4	2	1	7
Sinhalese*	2	-	-	2
Maths*	-	-	1	1
Biology	-	-	1	1
Science*	1	-	-	1
Home Science*	1	2	1	4

* These are subjects in the present curriculum. The interviewers were unaware of this or they might have been stressing the importance of these subjects.

TABLE 17. OPINIONS OF A SAMPLE OF FORMER STUDENTS ON SUBJECTS THAT THEY WOULD LEARN WITH INTEREST IF THEY COULD RE-ENROL IN SCHOOL

Subjects	Number of former students
Health	1
Handicraft Technical Mechanical Vocational	10
Machine Embroidery sewing	4
Batik	3
English	6
Accountancy	1
Science	1
History and Buddhism	1

There follow tables which provide the opinions of those interviewed on Adult Education.

TABLE 18. OPINIONS ON THE SUBJECTS THAT A SAMPLE OF THE COMMUNITY WISH TO SEE TAUGHT IN EVENING/ADULT EDUCATION CLASSES

Subjects	Number of community members opting for the subject			Total
	Former students	Parent of present students	Other parents	
Technical Handicraft Vocational Mechanical	5	5	2	12
Sewing Batik Weaving	7	9	9	25
English	6	4	1	11
Electrical Wiring	1	-	1	2
Motor Mechanism	1	-	1	2
Radio	-	1	-	1
Carpentry	-	-	1	1
Welding	-	-	1	1
Home Science	-	-	1	1
Cake making	-	1	-	1
Social subjects	-	1	-	1
Sinhalese	-	2	-	2
Maths	-	1	-	1
No opinion	13	7	9	29

TABLE 19. OPINIONS ON THE SUBJECTS THAT A SAMPLE OF THE COMMUNITY WOULD WISH TO STUDY IF OPPORTUNITY WERE TO BE PROVIDED

Subjects	Number of community members wishing to study the subject			Total
	Former students	Parents of present students	Other parents	
Handicrafts Technical Mechanical Vocational	4	3	2	9
Sewing Weaving Batik Lace Making	9	3	2	14
Accountancy	1	-	-	1
Maths	1	-	1	2
Home Science	1	-	2	3
Flower Making	-	1	-	1
English	5	3	-	8
Sinhalese	-	1	1	2
Electrical Wiring	-	-	1	1
Motor Mechanism	2	-	-	2
Radio	-	1	-	1
Welding	-	-	1	1
No response	11	11	16	38

TABLE 20. OPINIONS ON THE SUBJECTS THAT OTHER MEMBERS OF THE HOUSEHOLDS IN THE SAMPLE WISH TO LEARN

Subjects	Number of community members wishing to learn the subject			Total
	In the household of former students	In the household of present students	In other households	
Mechanical Technical Vocational Handicraft	1	5	-	6
Sewing Weaving Lace-work Batik	4	12	4	20
English	3	2	-	5
Hair-dressing	-	1	-	1
Home Science	-	1	-	1
Mathematics	1	-	-	1
Motor Mechanism	1	-	-	1
No response	25	7	16	48

TABLE 21. FORMER STUDENTS AND THEIR ACTIVITIES IN AND OPINIONS ON RECREATIONAL AND SPORTS ACTIVITIES

Activity	Number reporting participation in or desire to participate			Total
	Currently participating	Wish school to organize	Hope to participate	
Soccer	9	8	7	24
Net-Ball	4	7	7	18
Volley-Ball	2	2	2	6
Indoor Games	-	1	-	1
Drama	1	1	-	2
Listening to Radio	1	-	-	1
Gardening	1	-	1	2
Reading Club	-	1	1	2
Cricket	-	1	-	1
No response	15	13	14	42

TABLE 22. PARENTS AND HOUSEHOLDS OF PRESENT STUDENTS AND THEIR ACTIVITIES IN AND OPINIONS ON RECREATIONAL AND SPORTS ACTIVITIES

Activity	Number reporting participation in or desire to participate				Total
	Parents currently participating	Parents wish the school to organize	Parents hope to participate	Other household members hope to participate	
Soccer	5	7	2	1	15
Net-Ball	1	3	1	3	8
Volley-Ball	1	1	1	2	5
Sports/ Games	1	2	-	-	3
Flower Making	1	-	-	-	1
Radio Listening	2	-	-	-	2
Music	1	-	-	-	1
Reading Club	-	1	-	-	1
Cricket	-	2	1	1	4
Rugger	-	1	-	-	1
Boxing	-	2	1	-	3
Athletics	-	2	1	-	3
Social Work	-	1	1	-	2
Carrom	-	-	1	-	1
No response	24	12	23	22	81

TABLE 23. PARENTS AND HOUSEHOLDS HAVING NO STUDENTS IN THE OPEN-PLAN SCHOOL: THEIR ACTIVITIES IN AND OPINIONS ON RECREATIONAL AND SPORTS ACTIVITIES

Activity	Number reporting participation in or desire to participate				Total
	Parents currently participating	Parents wish the school to organize	Parents hope to participate	Other household members hope to participate	
Soccer	1	8	-	1	10
Swimming	1	1	-	-	2
Sports/ Games	1	-	-	-	1
Cycling	2	-	-	-	2
Radio Listening	1	-	-	-	1
Reading Club	1	-	-	-	1
Badminton	1	1	-	-	2
Social Work	2	1	-	-	3
Net-Ball	-	3	1	1	5
Indoor Games	-	2	1	1	4
Cricket	-	3	-	2	5
Volley-Ball	-	-	1	1	2
Rugger	-	-	-	1	1
No response	14	7	21	19	61

Choice of Technical, Vocational Subjects Versus General Academic Subjects

It was found that those former students who had a higher grade level attainment in school showed a greater tendency to choose subjects such as English as being useful subjects or worthwhile adult education subjects. To discover whether such a tendency exists the former students were classed into two groups namely those having at least their education upto grade 9, and those who do not have an education beyond grade 8. A consistent difference in their responses was shown. The following table gives those in group (1) compared with the total responding to the relevant item of the questionnaire.

TABLE 24. OPINIONS OF THE SAMPLE OF THE COMMUNITY HAVING EDUCATION TO GRADE 9 AND ABOVE COMPARED IN RESPECT OF PREFERENCES FOR PRACTICAL AND ACADEMIC SUBJECTS

Item from questionnaire	Total percentage choosing practical subjects	Total percentage choosing academic subjects
1. Useful subjects in current school curriculum	33	80
2. Additional subjects to be included in school curriculum	40	85
3. Subjects which former students would learn with interest if they could enter school again	40	67
4. Useful 'adult education' subjects	50	67
5. Choice of adult education subjects	30	83

Such a tendency could be expected among the present students' parents and among the general members of the community. However, in view of the lower grade level attainment of the members of school neighbourhood and the employment and income status as indicated above, a greater demand for vocational/technical subjects could be expected.

Chapter Five

POSSIBLE AREAS OF COMMUNITY PARTICIPATION IN THE OPEN-PLAN SCHOOL, ORGANIZATIONAL AND PLANNING STRATEGIES REQUIRED AND GENERAL RECOMMENDATIONS

Delivery of education to the community

It can be assumed that the success of the Open-Plan school as a delivery system for Community Education will be determined by the extent of Community participation. The numbers of the participants alone in various learning programmes will certainly indicate a degree of success. However, a greater significance should be attached to the qualitative aspect of the participation as reflected by the degree of involvement of the participants in the planning, organization, monitoring and management aspects of the delivery system. The delivery system would then acquire a self-sustaining character, while making it possible for it endogenously to foster elements that ensure further growth and development. It will therefore be profitable deliberately to build into the delivery system, elements that would ensure participation and make the delivery system itself develop and grow. The first task in evolving such a strategy is the search for felt needs of the community. The next task is to search for characteristics of the community which could support a self-sustaining and growing organization, delivering the community education programmes, together with the discovery of characteristics of the community which will reduce participation and hinder the delivery of the education programmes.

The tables in Chapter Four indicate a general demand for opportunities to learn technical/vocational subjects as well as subjects such as English. Out of the technical/vocational subjects the responses showed a demand for the development of definite marketable skills such as batik work, welding, sewing and ladies hair styling. At the same time the demand for opportunities to learn English may indicate a belief of the community in the value of English as a vehicle of social and economic advancement. Therefore, to ensure initial success through greater participation it will be prudent to select a few popular subjects such as sewing/machine embroidery, batik making and tinkering/welding and English as Community Education subjects.

The idea of an Open-Plan school is not held in favour by some of the current students' parents, who fear that the school will be swamped by outsiders under such a scheme. The acquisition of a new, spacious, multi-storied building has given the school some prestige. At the same time the parents have come to regard the provision of the new building as a prelude to the school gaining parity with the most prestigious and affluent schools in Colombo. The Grade 9 National Certificate of General Education (NCGE) Examination results of this school in 1975 and 1976 should indicate how unrealistic these expectations are. In 1975, 96 percent of the students offering science could not reach above the 30th percentile on the National scoring scale and 18 out of 27 or 67% of the students could not reach above the 10th percentile level. In mathematics 96% could not reach above the 30th percentile level, while 41% could not reach above the 10th percentile level. In English 88% could not reach beyond the 30th percentile level. The results of the 1976 NCGE Examination did not show any improvement. 98% of the students could not reach above the 30th percentile level in science and mathematics while about 90% could not reach above the 10th percentile level in these subjects. In subjects like Sinhalese or social studies, the performance was as poor. In some pre-vocational subjects however there were no students below the 10th percentile level, up to about 77% reaching above the 30th percentile level.

In view of the need to gain acceptance for the Open-Plan idea and to win the co-operation of the parents of the present students, it is best to begin by providing adult education facilities for the former students of the school and for those in the households of the students already enrolled in the school. It will also be fruitful to provide such facilities for students in grades 8, 9 and 10. Some tutorial help in school subjects, could also be included in their package. Such a strategy, it is felt, would ensure the elimination of factors which might hinder the acceptance of the programme. When those members of the community who are already associated with the school see the benefits of the Open-Plan school idea it will be opportune to expand the scheme to cover the general community. Concurrently, curricular and methodological innovations in the school programme should be introduced, taking into consideration the views of the parents and others concerned and the constraints in the environment.

The continuing success of the Open-Plan scheme will, as related earlier, depend on the dynamic nature of the delivery system. In this case the very failures of the school could be turned to advantage. About 75% of the former students interviewed were unemployed. They could form the nucleus of community level organizers of the Open-Plan, education programmes. These students appeared quite enthusiastic and, being young, are ready to try out new ideas. Their educational levels compare well with those of others in the community having a median grade attainment level of 8. The corresponding figures for their parents and the present students' parents is 5, while for the other parents it is 7. The organizational personnel should include the school teachers and other community resource personnel but recent, former students could form the core of the community level, supporting personnel.

School and community

During the survey it was seen that the school lacks sufficient exemplars of successful former students. A determined effort must be made to discover skilled exemplars because the skills they have are automatically associated with success. Such exemplars among former students should be involved in the organization of programmes wherever possible. For some of the skills-training such as welding or batik work it will be advantageous to use the skilled personnel available in the community as resource personnel. While such a scheme will be more economical, these personnel will additionally serve as community exemplars. The responses to the questionnaire items regarding recreational activities indicate a preference for team games such as soccer and net-ball. Therefore these should be among the first recreational activities to be organized. The wired-in roof of the building (Plate 10) could be utilized for the provision of net-ball and volley-ball courts, while soccer would require the use of the playgrounds already available in the neighbourhood. Although only one person indicated a preference for a reading club, it is an idea which could be developed to provide a service to the community. Such a service could complement the adult education programme as well.

Total community development

Taking into account the complexity of the dynamics of community development it will be fruitful to find means to integrate the various Open-Plan school education packages into a complete community development scheme. It has been found elsewhere in Sri Lanka that health, nutrition and public sanitation aspects of community development find ready acceptance. Such development aspects can bring together the disparate elements of the community. The health nutrition and public sanitation goals are easily understood by the community and the benefits are quickly seen. Moreover State organizations are ever-ready to provide the services free of charge. Also a public sanitation improvement scheme will give a boost to the morale of a depressing neighbourhood and will help the community take notice of a rarely seen, beneficial scheme.

The resource potential of the community, its weaknesses, and facilities available in the school have to be assessed in order to initiate a viable programme of education. The programmes of action proposed below are based on consideration of the aforementioned factors. Each proposal is followed by a brief outline of the steps necessary for implementation.

Proposals for implementation

1. To provide for the teaching of Technical/Vocational subjects:

   (a) batik work/sewing;
   (b) motor mechanism;
   (c) hair styling;
   (d) welding.

Plate 10. The flat roof with wired fence can be used for games

These programmes have to be designed to meet the needs of adults and former students.

The Non-formal Education Division of the Ministry is presently responsible for the organization and supervision of non-formal programmes throughout the country. This Division will organize the above programme in consultation with the Principal, Regional Director and the P.T.A. The Ministry will provide the equipment required but the participants should bear the cost of materials. It is desirable to enlist the cooperation of the various business and industrial organizations situated in the vicinity of the school.

2. To provide facilities for teaching of English to former students and parents of former and present students. Presently the Non-formal Education Division of the Ministry of Education is conducting "100 English Schools" for the teaching of English to adults using the facilities available in existing schools. This division will organize a similar programme in the Open-Plan school.

3. To provide for the following recreational and cultural activities to the community:

   (a) Games - volley-ball, soccer, net-ball;
   (b) open air film shows;
   (c) extension of library facilities to the community.

A Welfare Board, comprising the representatives of the community, P.T.A. and other well-wishers, should be established to organize the above activities. The Ministry of Education will provide the necessary sports equipment and materials. Films may be obtained from the Government Film Unit, and other appropriate sources.

The school library should be kept open in the afternoon for use of the community. It has access for this purpose.

4. A well-planned, remedial assistance programme for children already in school who need such services should be provided. This should be arranged after normal school hours.

5. A non-graded, vertical grouping of students in the primary grades to enable them to learn at their own pace, should be organized in consultation with the Curriculum Development Centre.

6. Movable screens should be installed to provide for the flexible partitioning of teaching-learning spaces.

7. Special training and orientation programmes for teachers and the Principal of the Open-Plan school should be provided. This programme should be designed and conducted by the relevant staff of the Curriculum Development Centre, the Non-formal Education Division and the Principals of schools who have experience in such innovations.

8. Additional staff necessary for conducting the programmes referred to above are as follows:

   (a) Deputy Principal to be in overall charge of the activities conducted outside the normal school hours.

   (b) Head Master to be in charge of the Primary Section.

9. Steps should be taken to provide for an awareness of the programmes among the community members, through meetings of the P.T.A., convened to explain the innovations which are to be introduced and which are listed above. The former students of the school, particularly those who helped in the survey, should be utilized as agents of change in the process of awareness-creation.

The various activities should be integrated into a coherent whole through a neighbourhood development project embracing health, nutrition and public sanitation aspects as well. The former students of the school, the principal and the tutorial staff should form the core project personnel.

Chapter Six

CONCLUDING COMMENTS

Barriers to education

The unique role which schools play in the transmission of knowledge and the development of life skills has triggered off, in recent years, animated discussions on what goes on within the schools and the linkages that should exist between the schools and the communities in which they are located. Stereotyped modes of instruction which fail to take cognizance of the divergent interests and backgrounds of the clients have tended to alienate the school from the community. The worst affected by the currently practised methodologies are the children coming from disadvantaged backgrounds. Success in school is determined by a variety of factors, some of which are in the home environment. The poverty of the environment manifests itself in low motivation, under-achievement and pre-mature dropping-out. The dropouts from the formal system and the disadvantaged who never enter school find themselves in a range of situations which differ in their capacity to offer opportunities for further development. Tradition-bound views that fail to recognize the wider scope of education which transcends schooling, both in time and space, are obstacles to the implementation of non-formal programmes designed to help the members of the community. Further, inertia in institutions tends to hinder innovation-diffusion and much effort is required, specially at the initial stages, to sustain and bring to fruition any programme which departs from the traditional pattern.

The environment of Kompannaweediya School

The Kompannaweediya School is situated in an area which has all the attributes of an urban slum in a developing country. The attributes, however, are not evenly distributed so that it is possible to recognize a number of smaller slums within a larger slum which depicts a spectrum of unfavourable parameters generated by the culture of poverty. All the slum-dwellers are under-priviledged, though the degree of deprivation varies from one 'slum-pocket' to another. The majority of the houses are low, dingy, sprawling dwellings which compete for the few inadequately supplied amenities such as pipe-borne water, and sewage-disposal. Low income, low educational status, large family size, low motivation and a kind of resignation to a ruthless destiny are the common characteristics of the households. Employed parents hardly find time for the pursuit of leisure activities or participation in cultural/educational programmes. The unemployed men are either on the lookout for jobs or engaged in odd jobs, with or without linkages with the "underworld". The unemployed

women are busy with household chores and seem to be unenthusiastic about community-oriented educational or training facilities. The youths still have some hope and are willing to better their prospects in the search for employment. Children attending school receive little or no stimulation from the home environment and community. The whole constellation of factors impinging on the lives of the slum-dwellers is unsympathetic and unrelenting. The factors are real and tangible and have to be taken into account in designing innovations to benefit the school-going children, youths and adults who together constitute the community of Kompannaweediya.

Innovations

The Kompannaweediya school was designed at the Asian Regional Institute for School Building Research. The school building has design features making it as open as possible. Openness contributes to both flexibility of arrangements within the school and disappearance of barriers between the school and the community. Absence of permanent partitions in the form of brick-walls between classes admits of grouping of pupils to suit different instructional methodologies. The special spaces and the furniture therein can be put to a variety of uses. The low wall round the school is symbolic of the intention of the designer to bring the school and the community closer together. All possible efforts should, therefore, be made to optimize utilization of the facilities in this open-plan building. However, optimization is a function of many factors.

The suggestions outlined in Chapter Three and the recommendations contained in Chapter Five are based on a critical assessment of constraints operating within the school and the community, and the options available in Education. The trend towards instructional alternatives is a reaction to a uniform pattern of teaching all subjects to all students coming from different socio-economic backgrounds. Recognition of the importance of community involvement in school programmes and the realization of the continuing nature of education have resulted in attempts directed towards the demolition of barriers between school and community. These efforts have met with varying degrees of success in different communities. Successful implementation of alternatives depends on the interest engendered in teachers, parents, students, and education authorities. The presence of a low wall round a school or the absence of a wall may be interpreted by the community as the absence of a physical barrier between the community and the school. But what is far more important in the demolition of psychological barriers between school and community. Re-orientation of attitudes and inculcation of values favouring experimentation with innovations are essential to the organization of viable programmes for the benefit of children and their parents. Further, sufficient time is necessary for fostering professional leadership in advancing educational options. Good teachers, enthusiastic parents, relevant curricula and motivated students are the essential components of an effective teaching-learning environment. However, over-enthusiasm on the part of innovators may lead to faddism and the cult of options. Under no

circumstances should children and their parents be made to suffer as a result of mis-placed enthusiasm. What is required is a cautious approach based on consideration of realities, constraints and limitations inherent in the community, schools and the options in education.

Utilization of facilities available in schools for conducting non-formal programmes to benefit school leavers and adults is not a novel phenomenon in Sri Lanka. However, in most places the buildings have not been designed and constructed according to the 'open-plan' concept. The Kompannaweediya school is the only school in Sri Lanka which has an 'open-plan' building. The experience of Kompannaweediya will be useful not only to Sri Lanka but also to other countries in Asia which are at a similar stage of socio-economic development.

The scope and objectives of the present study, its findings and conclusions and the recommendations for inauguration of activities to benefit the clientele population have been indicated in the preceding chapters. Although the working out of the details of operational steps does not fall within the scope of the study, the elements of a framework for designing operational procedures are suggested in Chapter Five. Mobilization of local support through the active involvement of exemplars and change agents is necessary for the successful implementation of the proposals which are summarized below:

1. Inauguration of courses of a technical/vocational nature.

2. Provision and organization of facilities for:

   (i) teaching English, and
   (ii) cultural and sports activities.

3. Installation of movable partitions between classes/ student groups.

4. Non-graded vertical grouping of students in the primary grades.

5. Integration of activities referred to through a neighbourhood development project.

The catchment area of the Kompannaweediya school is located in a multi-member constituency. The catchment area itself is formed by three wards of the Colombo Municipality. The cross-currents of conflicting interests have to be weighed and reconciled in furthering the wider interests of the community. Innovations by their very nature are departures from tradition and they succeed when they are accepted by the community and when the local leadership is committed to innovation-implementation. Therefore, all efforts should be made to secure the cooperation of the representatives and change agents of the community in translating into reality the above recommendations which seek to satisfy some of the felt needs of the clientele population.

ANNEX 1

SURVEY QUESTIONNAIRE

(former students)

Name of Group Leader

Group 1/2

Wekanda/Kompannaweediya/Hunupitiya

a) Name of Chief Occupant

Address

Name of former student interviewed

b) Number of members in household –

i) Adults
ii) Former students
iii) Present students
iv) Students of other schools
v) Children under five years old

c) Particulars of former students –

i) Last grade attended
ii) Certificate obtained
iii) Reason for premature leaving
iv) Present employment
v) Monthly income

d) i) Father's occupation

ii) Mother's occupation

iii) Other employed members (number) in the household

iv) Monthly household income

e) i) Father's educational status

ii) Mother's educational status

f) i) Former student's views on the school curriculum followed

ii) Particulars of non-formal educational activities which he or she wishes the Open-Plan school to provide

g) i) Recreational activities of the former student

ii) Particulars of recreational activities which he or she wishes the open-plan school to provide

SURVEY QUESTIONNAIRE

(Parents of present students)

Name of Group Leader

Group 1/2

Wekanda/Kompannaweediya/Hunupitiya

a) Name of Chief Occupant

Address

b) Number of members in household –

i) Adults
ii) Former students
iii) Present students
iv) Students of other schools
v) Children under five years of age

c) Educational qualifications of parents

d) Employment status of parents

e) Monthly income of household

f) i) Parents' view on the school curricular programme
ii) What parents wish the open-plan school to provide by way of non-formal educational programmes

g) i) Recreational activities of the parents
ii) Particulars of recreational activities which they wish the open-plan school to provide

---

SURVEY QUESTIONNAIRE

(Other members of the community)

Name of Group Leader

Group 1/2

Wekanda/Kompannaweediya/Hunupitiya

a) Name of chief occupant

Address

b) Number of members in the household –

i) Adults
ii) Present students
iii) Children under five years of age

c) Educational qualifications of chief occupant

d) Employment status of the chief occupant

e) Monthly income of the household

f) Chief occupant's view on the school curriculum

g) What the chief occupant wishes the open-plan school to provide by way of non-formal educational programmes

h) i) Recreational activities of the chief occupant
ii) Particulars of recreational activities which he or she wishes the open-plan school to provide

USERS' MANUAL

for the new Kompannaweediya School

by A. Sikkema

Asian Regional Institute for
School Building Research (ARISBR), Colombo, 1970

INTRODUCTION

The building comprises 5 working levels or floors as follows:

Ground	-	Open (shaded)
One	-	Closed
Two	-	Closed
Three	-	Closed
Roof	-	Open (partly shaded)

The entire building, apart from toilets, store and shop contains the following enclosed lockable spaces.

Library, Art room, Home science laboratory and a small conference room.

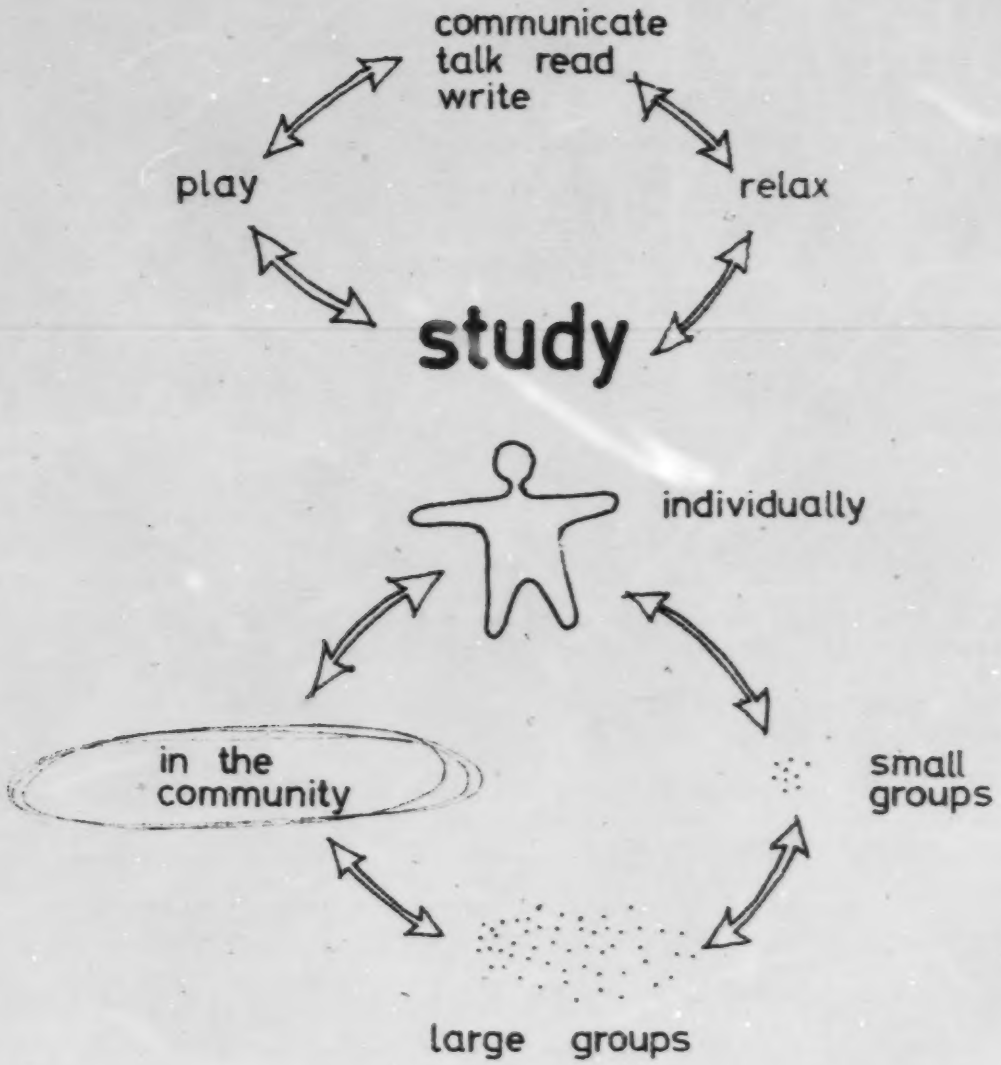
The building is designed for maximum flexibility and can be adapted to a great many changes which will be desirable during the lifespan of this school.

The school can accommodate approximately 700 children at one time, that is two streams from grade 1 through grade 9.

It is planned that the first floor will contain library and art room, social studies room, administration staff rooms, conference room, two classrooms and a home science laboratory.

The second floor will contain 4 classrooms, a multi-science lab. and a prevocational subject area (workshop).

The third floor will contain 10 classes of grade 1-5.


communicate
talk read
write
play
relax
study
individually
in the
community
small
groups
large groups

THE SITE AND THE COMMUNITY

The site is surrounded by a one foot high and one foot wide wall which serves as a seat and prevents bullock carts and automobiles from using the school site as a parking lot.

A high wall around the school would show the community that the school does not desire a relationship with it, which is contrary to the function of the school. A high wall is an insult, an invitation and a challenge to come and take anything of value.

Furthermore, a high wall prevents the public from seeing a burglar, once he has climbed over the wall (a very simple thing) and when the watcher (often a somewhat elderly person) has discovered the burglar and chases him, the wall is easily passed by the burglar but forms a real barrier for the watcher and allows the intruder to escape.

The school should be as open to the community as possible in order to make the teaching as relevant as possible for the students who live in the neighbourhood and will return, and hopefully contribute, to the community to which they return after school.

The absence of a high boundary wall is vital.

Of course, the school is completely and easily lockable. An entrance door to each staircase, prevents, when locked access to all upper floors. Windows and entrance doors to each floor can be closed and locked.

A few enclosed spaces are to be found on the ground floor.

A shop in which snacks, icecream, milk, lunches, products of the school (handicrafts, art, vegetables, flowers) and so on can be sold. It can be managed partly or completely by students in turn and can provide a background for useful learning: accounting, advertising, management, book-keeping, storing, planning etc.

Enclosed showers - One area for boys, one area for girls with separate entrances. To be used after physical education, playing, gardening or even before entering the school and as a part of health education. Hopefully, arrangements can be made to use it as a public bathing place for the community, which could contribute to its maintenance.

Storage for teaching equipment (gardening, physical education) and furniture, used on the ground floor is provided under the "staircase and toilet block".

A special space under the South Western toilet block is designated for short-term garbage storage (before it is collected).

Apart from these enclosed spaces, the site is completely open and the following activities are planned for:

Physical education (two paved areas for Volley-ball.

Assembly, large group teaching, music, dancing, drama, (shaded open area under the building and a stage).

Seminars, discussions, outside reading, canteen, relaxing (fixed benches).

Playing in sand (in the sandpit).

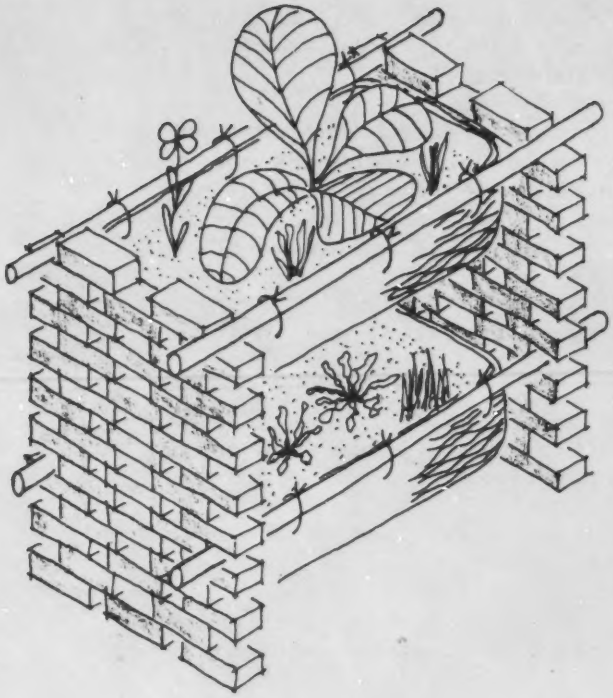
Table tennis (using the fixed, concrete ping-pong tables).

Gardening used as a basis for study of:- agriculture, nutrition, biology, flowers, vegetables' insects, small animals, climate, chemical soil testing etc. (Some garden areas are provided but more can be made by filling baskets with earth and supporting them on brick piers).

Play in the water and biology and fishery study. (Some water ponds).

The whole site can be used for the study of geography, students can measure the site, map it, study angles, levels, curved lines, contour lines, dig holes and make sand heaps study water levels, drainage and erosion.

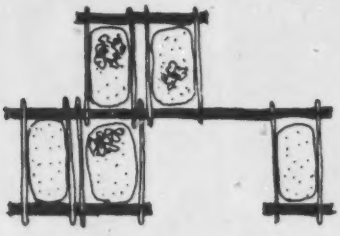
Most activities, using the site and the library and the home economics laboratory should be open to the public after school hours (under proper supervision).

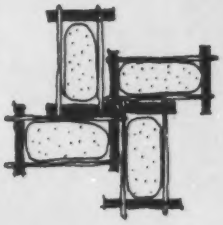


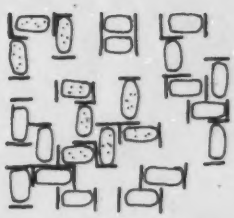
SMALL HANGING GARDENS

baskets, filled with earth,
tied to sticks,
supported on brick piers

teachers and students can make various arrangements







even
a labyrinth

The Roof

The flat roof is accessible and can be used for play, physical education, volley-ball and basket-ball, assemble, open air film shows (in the evening) dancing etc.

A 12-feet high fence retains most balls. Shaded areas may be developed by the students by building a temporary construction of bamboo poles, set in movable concrete blocks with holes and tied together and to the columns by ropes and supporting a net structure, covered with cadjan or any other available shading materials (such as growing plants).

A shallow waterpond (8 inches deep water) may be formed on the roof.

Gardening can be practised on the roof or on any floor using baskets (of cane or plastic strips) filled with earth, tied to sticks which rest on brick piers.

Baskets can be positioned in several layers over another and the effects of much or little sunshine can be studied. Excess water drains easily off.

Maybe, in the near future, each student may have his or her own garden basket.

First Floor

The Library and art room is separated from the rest of the first floor by an internal wall. This makes the following arrangements possible. The library can be opened for the public and the students while the whole school remains closed (for example in the evening) or the school can be opened and the library closed when there is no librarian. Or school and library can be opened simultaneously.

40 individual study tables are provided which can be arranged in various ways. A desk for the librarian or art teacher and a desk for an assistant. 10 additional desks and chairs are provided for teachers, they can use the library for their own study.

Catalogue card boxes, a wash basin, student book and bag racks and book-shelves are provided.

An open arrangement has been planned so that the students can search for books themselves and form small groups or work individually.

Provision is made so that hands can be washed before the library is used. It is hoped that the library will be used as an art room also. Reference books, art publications, a rather free arrangement of storage units and tables, creating "cosy corners", might be conducive to some enthusiastic art work. Colourful painting of ceiling, shelves, furniture by students should be stimulated.

The internal brick wall along which one enters the school is meant as a display area of students work, just purchased book covers, notices, news and so on.

The Home Science Laboratory can also be used by other schools or by the public while the rest of the school is closed. It also can be closed while the school is open and when there is no home science teacher on hand.

The Home Science Laboratory can be used by 40 girls at the same time, either composed of the female students of two parallel classes studying home science or one group of 20 girls studying the pre-vocational subject dress-making and tailoring and the other group of 20 girls studying home economics. Thus one or two teachers might work there at the same time.

Fixed shelving along the brickwall, a movable, lockable storage unit, four student book and bag racks, 4 sewing machines, a fitting corner, 5 sinks and a fixed worktop along the wall with several cookers are provided.

This laboratory is unused for many periods per week. It is suggested that students of nearby schools use the home science laboratory might be used for parts of health science and nutrition and biology subjects. Snacks can be prepared there and sold commercially or some food for lunch might be cooked occasionally.

School and community

Adult education and other community services are possible within this area.

The social studies room has ample storage space, part of which may be used to establish a museum or a collection of relevant items found by students. Two laboratory tables allow for some projects with sand, cardboard, foam plastic, water, models, map sketching etc. The sand pit on the ground floor can also be used for geography teaching models, erosion, contours, etc.

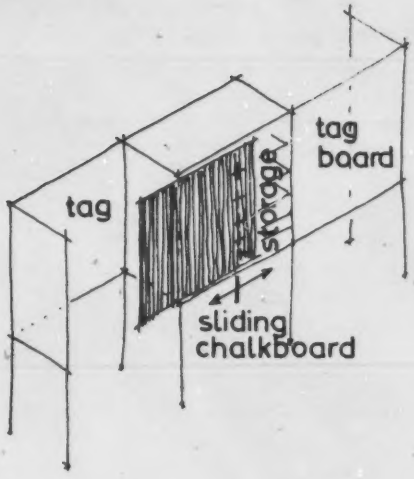
Administration and staff room is an open area, except for a small conference room which is enclosed and therefore has a fan. It is meant for any confidential discussion and not as a principal's office. There is waiting space outside.

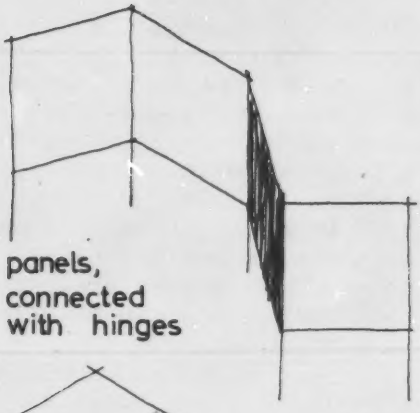
There is a relaxation area for the staff where they can meet for tea or lunch for meetings or planning sessions which are essential for team teaching or other innovative teaching techniques. It can also be used for student seminars or the meetings of parents and teachers.

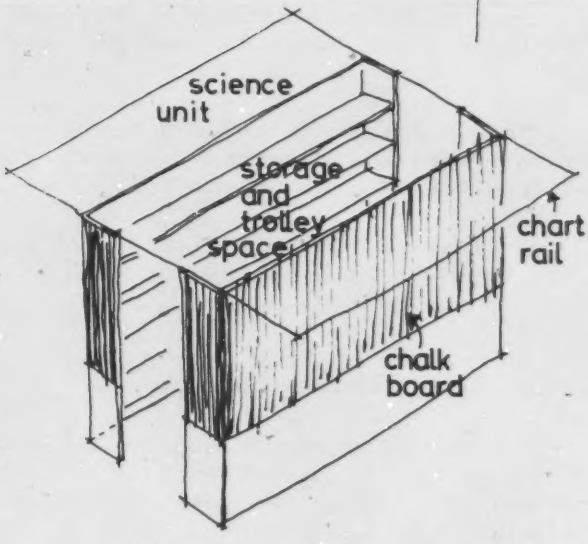
The office accommodates the principal, his deputy, a clerk and two teachers who do some administration part time as well. It has a lockable storage area.

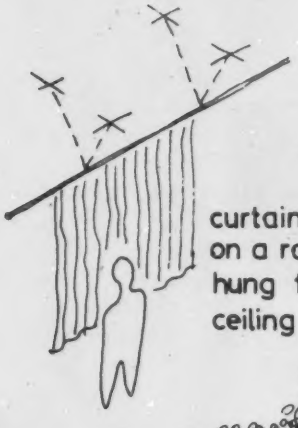
The minor staff can relax in an area near the North East entrance next to the cleaning store, in the future they may relax with the other staff.

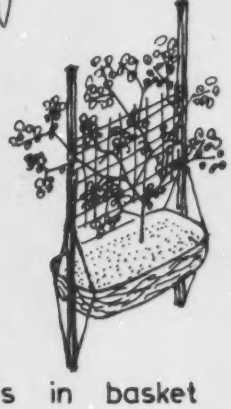
SOME PARTITIONS



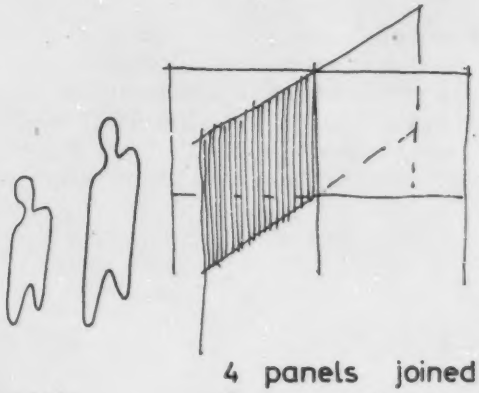








vines in basket with earth between posts fixed between ceiling and floor



4 panels joined form study corners

The multi-science lab. and the pre-vocational subject area are related, in both, students engage in manual experiments. Principles taught in one lab can be applied in the other (e.g. Pre-vocational electrical wiring and electricity in physics). Some subjects will require experiments in both labs. (Chemistry of leather treatment, dyes etc.). Activities will mostly be problem and student-centered. Individual work, and small group work will prevail. Occasionally the whole class gathers for a lecture, discussion or evaluation.

Drawers for small items such as bottles, etc. can be made in the book and bag racks, the top of which can be used for long standing projects. They can be stacked to form partitions and chalkboards can be fixed at them.

When water is required at the work bench, a trolley with a portable water container and portable sink can be put beside it.

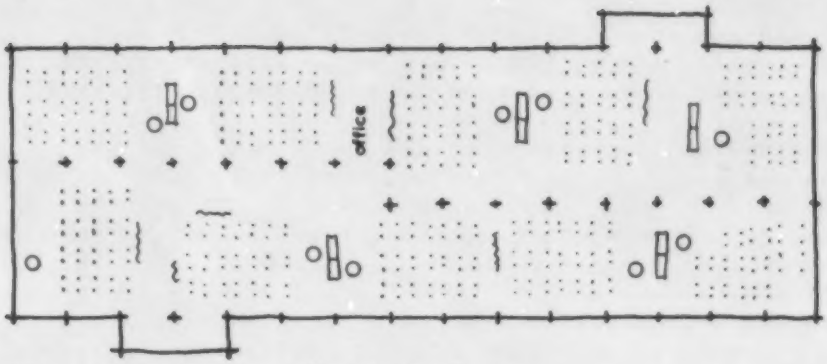
The trolleys can be used for pre-arranged experiments, sets of chemicals required for a lesson, and for transport to and from the storage units.

4 sinks, of which 2 with 3 taps each are located in such a way that they can be used by everybody using the second floor, whenever they need to do so.

The concrete floor around the two large sinks is protected against most chemicals by tiles.

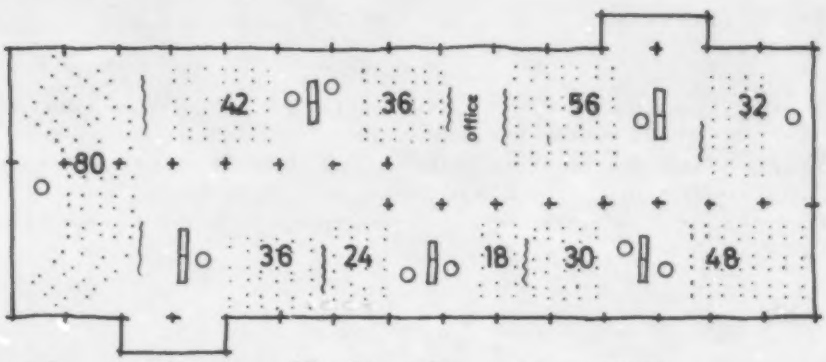
Biology experiments might need potted plants in varying degrees of sun-shine and even in complete darkness. This is possible by putting the pots in a storage unit and at varying distances from the windows.

Fume cupboards are not provided as the few poisonous gases which are produced in the O level curriculum can be rendered harmless by suitable treatment with other chemicals. Discussion on pollution could well be included in a syllabus. Some simple science equipment and school furniture can be made and/or repaired in the prevocational subject area.



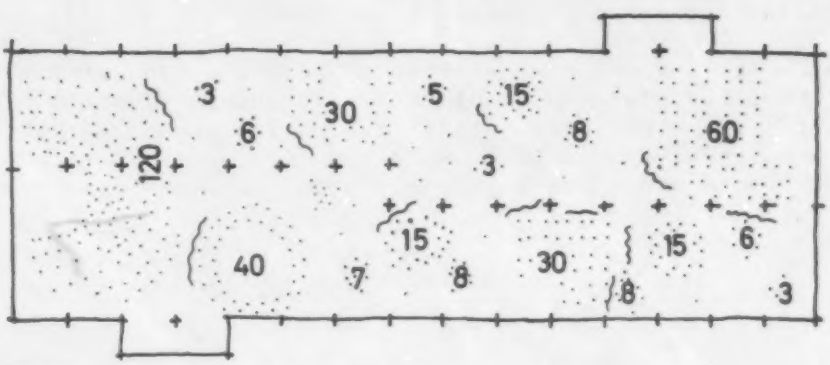
10 groups of 40 students

OR



not exactly 40 students per group
classes join when a teacher is ill

OR



many groupsizes

Flexible space and movable partitions

There are few internal brickwalls in this school. Separation of spaces will be achieved mainly by movable partitions, visual screens, chalk-boards, storage units, curatins, flowers and so on.

The ceiling absorbs noise and the movable partitions reduce the sound transfer between spaces.

One type of movable partition, introduced into this school is a panel (for example a chalkboard on one side and a pin-up board on the other) hung between two posts which are wedged between ceiling and floor by tightening a bolt. These panels which are visual screens can be hooked off immediately when a larger space or a view between spaces is desired. The posts may be removed later by a carpenter or a labourer but could also be moved by students and teachers when they have a spanner.

See Figure opposite, page 63.

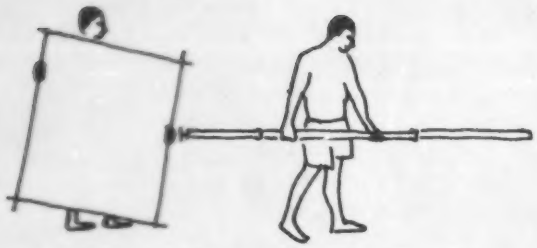
The flexible space facilitates the accommodation of changing group sizes.

Yearly change: Dropout rates will change. The number of students per class will deviate from the nominal 40. The movable partitions allow adjustment of the "classroom" size according to the number of students and thus avoid overcrowding in large classes or save space when there are only few students in a class.

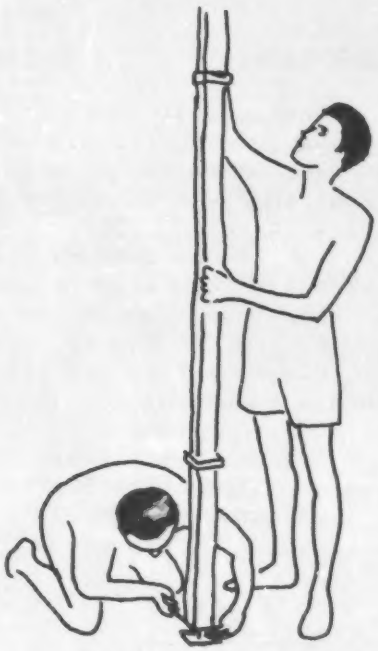
Groupings

Different group sizes may be achieved simultaneously and alternatively. Among the many ways to grade students is the method of (frequently) regarding the students according to ability or achievement or interest. It is possible to attain (for most of the time) the optimum correlation between the difficulty of the problem studied and the ability of the student, (at which correlation motivation is highest and learning fastest).

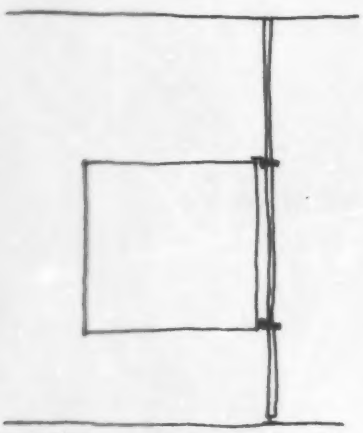
Each type of learning activity might have its optimum group-size. Probably students should study in groups of varying sizes alternatively: Individual study, discussion groups of 2-6 students, group work, seminars of 15-30 students, lectures, large group assembly for a short and highly motivational presentation or organizational purposes.



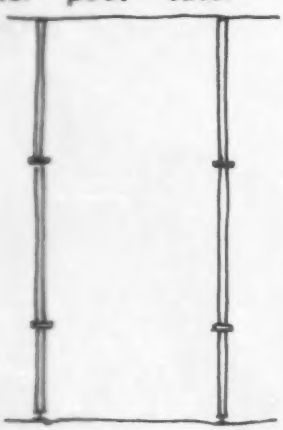
one carries a panel and another a post



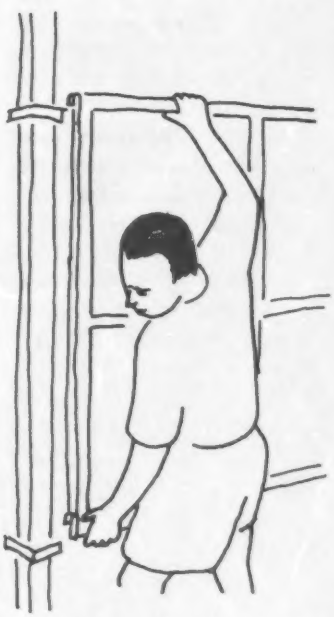
they tighten the nut to wedge the post between floor and ceiling



hang the panel and fix the other post later



OR



fix the other post first and hang the panel inbetween later

Teachers

During individual or group work, the teacher has time to go around advising. He becomes the manager of the learning process, a counsellor, a motivator, a listener to small group discussions who occasionally makes a stimulating remark. He builds learning experiences around the needs and interests of each individual student. When a teacher is ill, the partition between two classes are immediately removed and two classes can share one teacher.

Older students may assist teachers and participate in group work and discussions of younger students.

Teachers will learn from each other by seeing the others teach and they will have meetings on mutual problems. They will achieve improved correlation of the various subject matters due to cooperative planning.

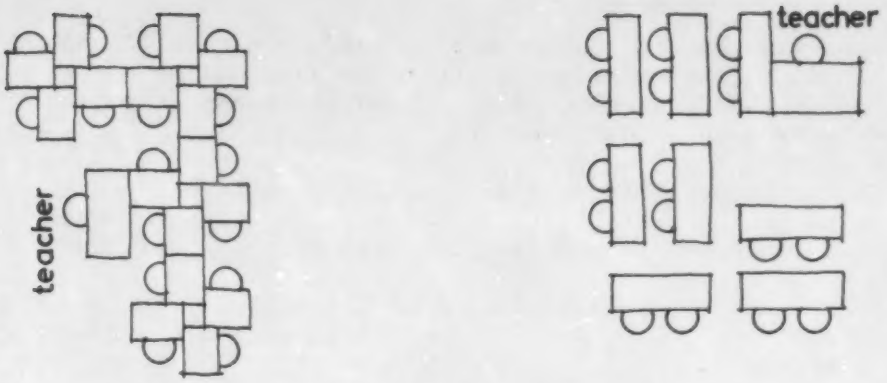
Time and movement

Optimum lengths of time of the types of activity within a class period may vary from a few minutes to the whole period depending on group size, complexity, way of presentation, and so on. Similarly the optimum group size may vary during one period.

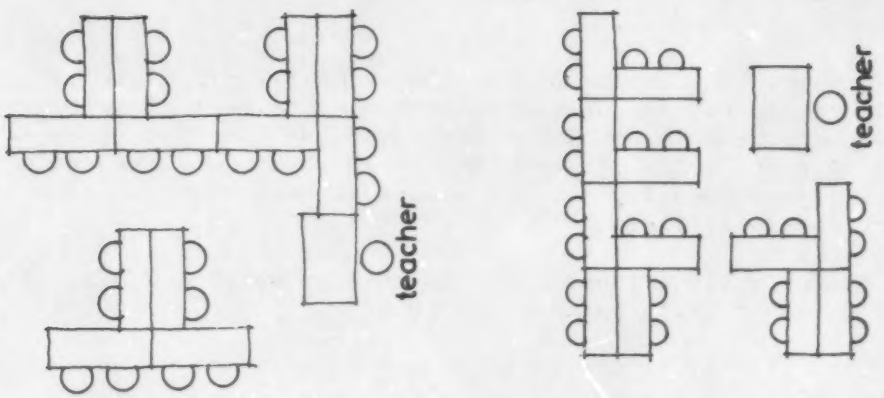
Everything moves.

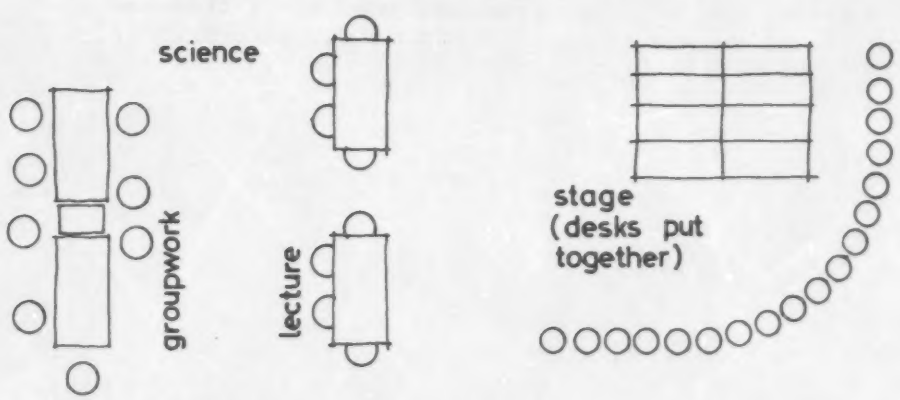
Students will move between spaces of different sizes and sizes of space will be adapted and students will be regrouped around moved furniture.

Through practical experiment and experience the students and the teachers may find the best possible alternative internal arrangements to study and to meet their specific abilities and requirements.



VARIOUS SEATING ARRANGEMENTS





The double shift system

Approximately 700 children from grade 1 to 9 will attend this school in the morning and about the same number can be enrolled in the afternoon. Morning and afternoon shift may change every week or month or so.

The afternoon shift may wait near the North Eastern staircase sitting on the concrete seats or playing. While the morning shift can leave the school via the South Western staircase.

Much learning can take place outside school. The morning session students can do much in the afternoon and the other group vice versa.

For example the public libraries can be used, the museum, the zoo, factories, offices, parks, the Beira Lake, the sea, the harbour, bus stations, shops and so on can be visited, observed, and studied.

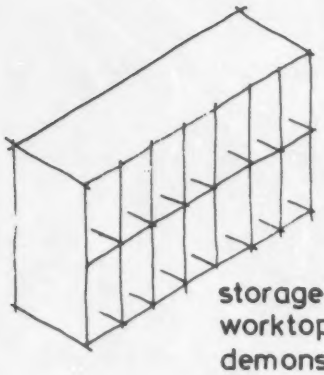
Students can do gardening, clean the streets of the neighbourhood repair houses, paint houses, street signs, Blind walls, help elderly people, carry water, do shopping, grow vegetables, chillies, onions etc. clean public toilets and if any other community service, which is educative, improves school community ties.

Students might teach their parents or watch and play with small children while parents are out.

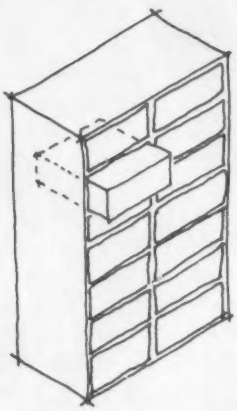
The area may be mapped as a geography lesson. Shop-keepers may be helped as a practice in calculating, management, advertisement, human relationships, economics, etc.

In short, the urban environment presents a tremendous variety of useful and relevant learning situations which might be tapped especially by a double shift school.

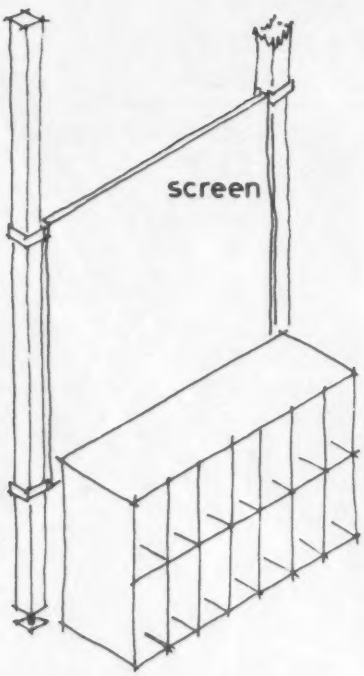
VARIOUS USES OF BOOK AND BAG RACKS



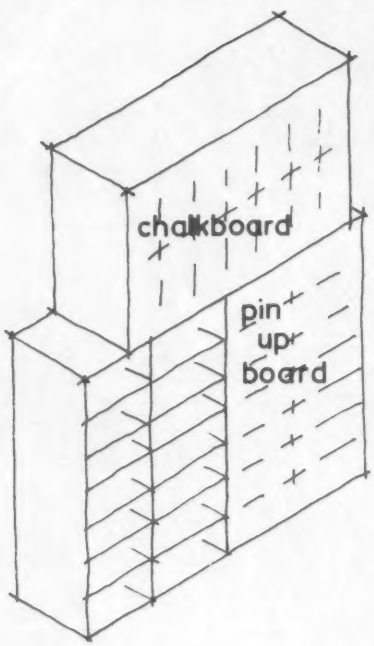
storage
worktop
demonstration
long standing projects



put drawers in a lockable door may be fixed to each compartment



electrical wiring bench



partition

Furniture of a range of dimensions is supplied to the school.

For health reasons and a number of other reasons there is an optimum ratio between the standing height of people and the height of the furniture.

Table height is approximately 0.4 standing height.
Chair height is approximately 0.25 standing height.

A work bench on which one works standing should have a height 0.5 times the standing height.

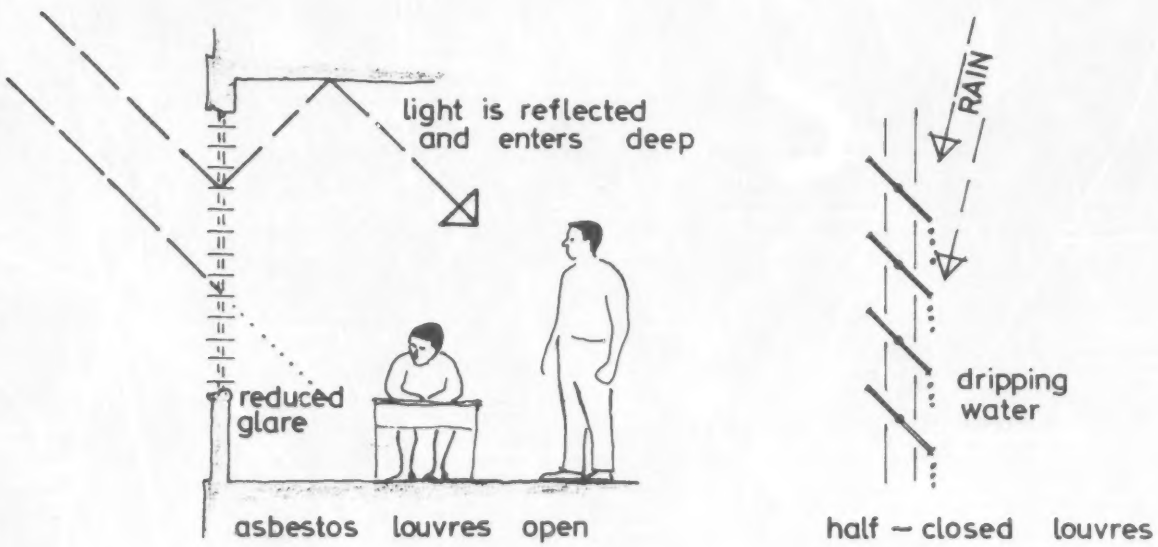
The stool belonging to this bench should be 0.35 times the student standing height.

When teachers can give some attention to this and direct the students (after measuring them) to the furniture which is most healthy for them, a great improvement is achieved.

The teacher tables are provided with casters, so that it is easier for the teachers to change location, to join student groups and to experiment with teaching in different ways and from different stand points.

Windows, light, rain

The movable window louvres are fitted with asbestos cement blades (and a few glass panes). They reduce the glare in the areas close to the windows and increase, by reflecting light to the ceiling, the illumination further away from the windows. Their best position is horizontal.



When it rains the blades may be tilted slightly outwards and the tube lighting provided can supply the additional illumination required. When it rains and a strong wind blows at the same time, all louvred on the windward side of the building must be closed.

Then, even with the lights on, a part of the school will be too dark to read or write, but many other activities are still possible, discussions, story telling, singing, and so on. Even, on the occurrence of a particularly frightening thunderstorm, the whole school might join in singing the same song all over the several floors and by doing so that students will feel gay and relieved. In this way the school building might play a part in an emotional response to a changing environment.

Toilets

At any entrance balcony, a student can go either a half flight of steps up or a half staircase down to find a boy's or a girl's toilet.

Staff toilets including a shower and a wash basin are at the end of each toilet group, arranged with locks and keys, if necessary, by the staff (including mirror and toilet conservancy staff).

It is proposed that the students and staff in a joint effort and as a part of health education will ensure the cleanliness of the toilets which might play a substantial role towards the health of the students. But this can only be really successful if soap will be available at the wash basins.

It is hoped that the Ministry of Education and the Principal can find some means to provide soap and to control its use.

No flushing cisterns are provided in the student-toilets as it is very difficult to keep them in working order in a school.

A tap is fixed in every toilet and a large tin or a small bucket should be there also. It can be filled at the tap and used to flush the toilet.

The bucket or tin should be fixed with a three foot long rope to the tap so that it may not be removed.

The proper use of a toilet must be taught to the students.

Maintenance

Maintenance is meant to save money in the long run (neglect causes very expensive renovations in the future).

Teachers and students and minor staff should jointly do most of the maintenance (specialist repairs are not mentioned here).

School and community

Clean the building regularly:-

Daily: Sweep floor, dust furniture, wash toilets, work in garden. Grow flowers and vegetables, feed fish in the pond and keep the site clean.

Weekly: Wash all floors, dust the ceiling, doors, shelves, storage units, tube lights, walls.

Monthly: Check all electrical lights and fuses and replace as necessary clean rain drains and rain water outlets from roof and staircase landings into down pipes, wash glass and asbestos louvres.

Every six months: Oil all hinges and the movable louvres, check electric lights, fuses, furniture, shelving, storage units, partitions and repair or replace as necessary.

Every year: repaint chalkboards and whitewash ceiling, colourwash, internal walls, and columns. Repair damage to screeds, columns, tiles and so on.

Repaint wooden door frames, doors, windows every 5 years.